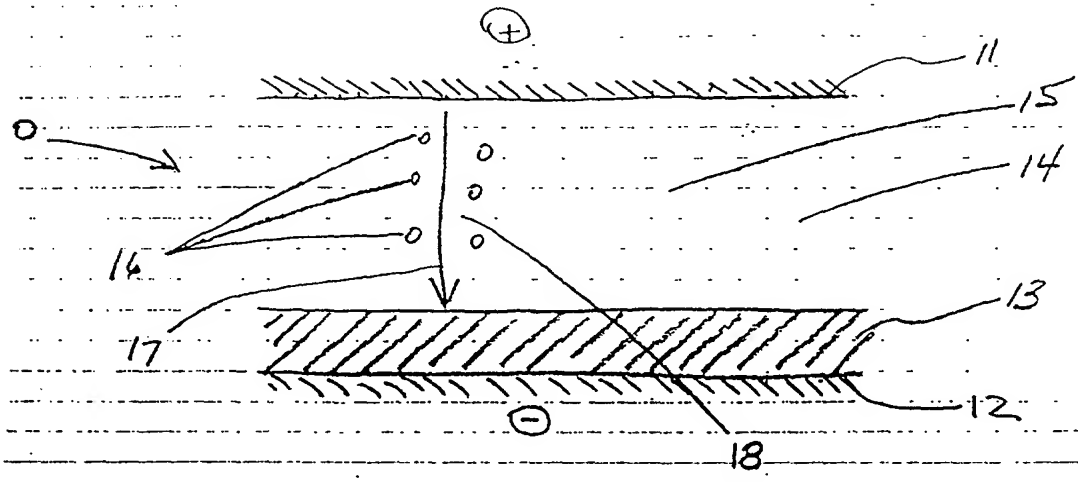



FIG. 1

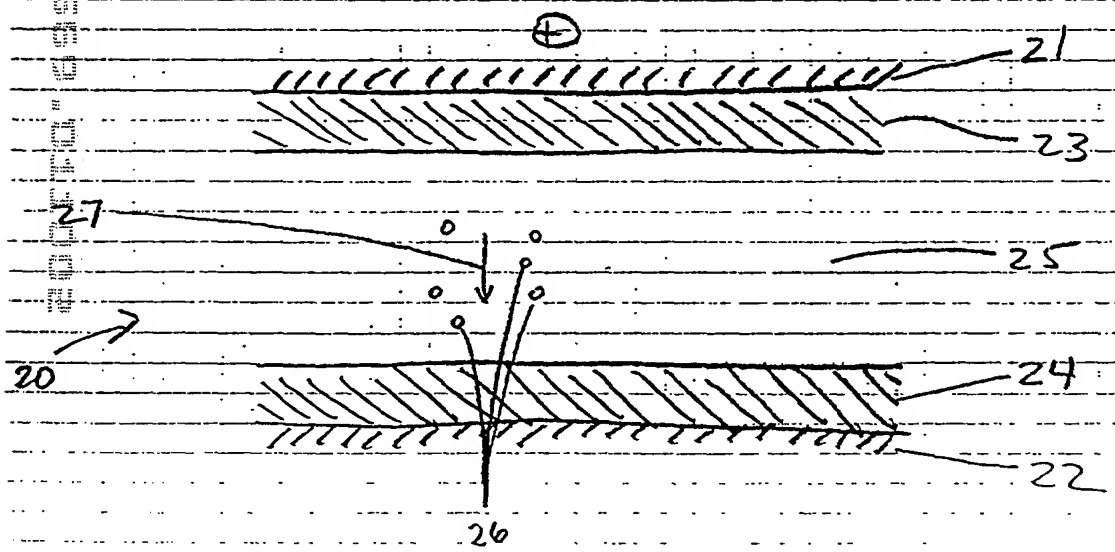



FIG. 2

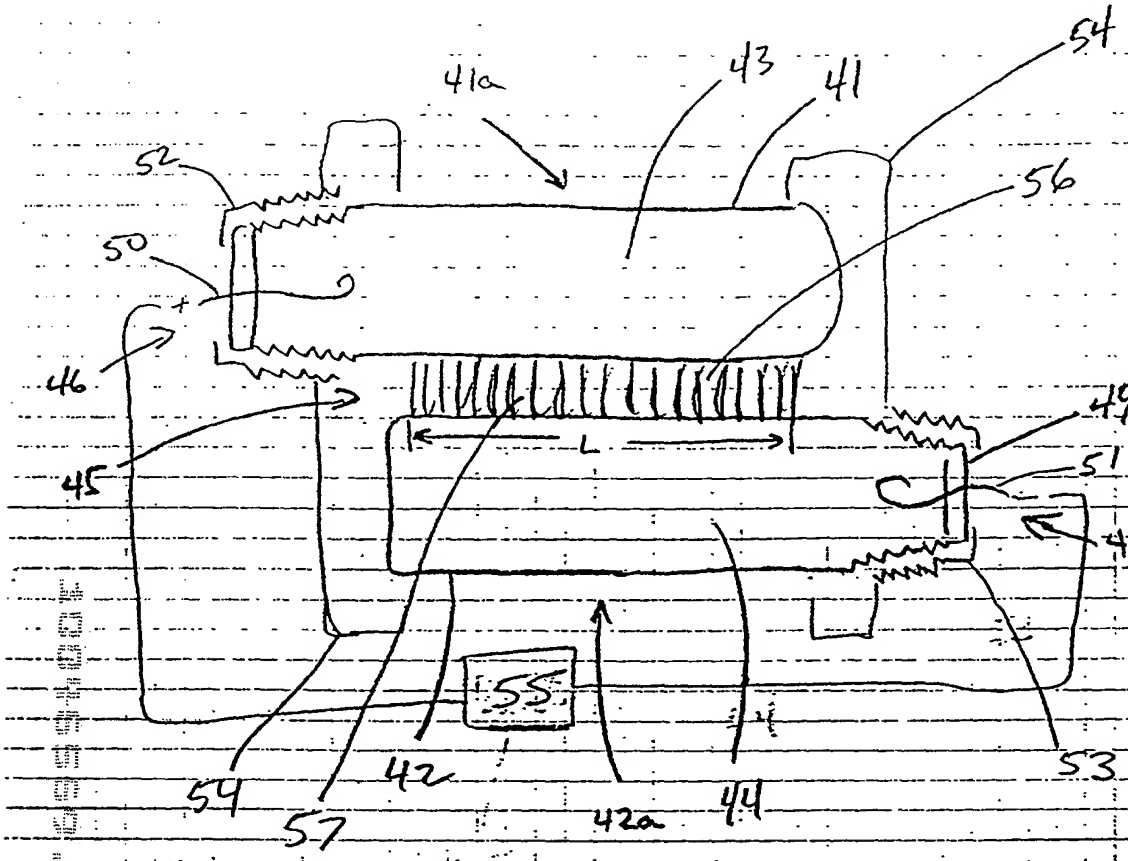



FIG. 3

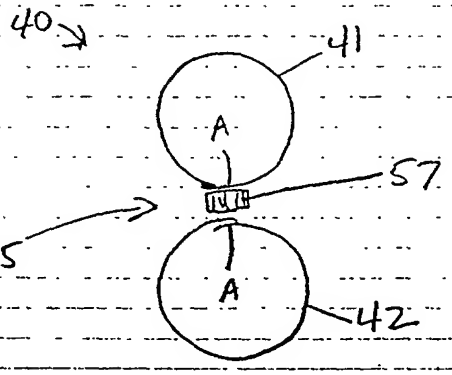



FIG. 4

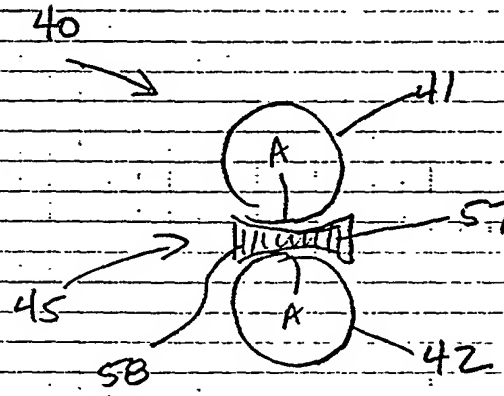



FIG. 5

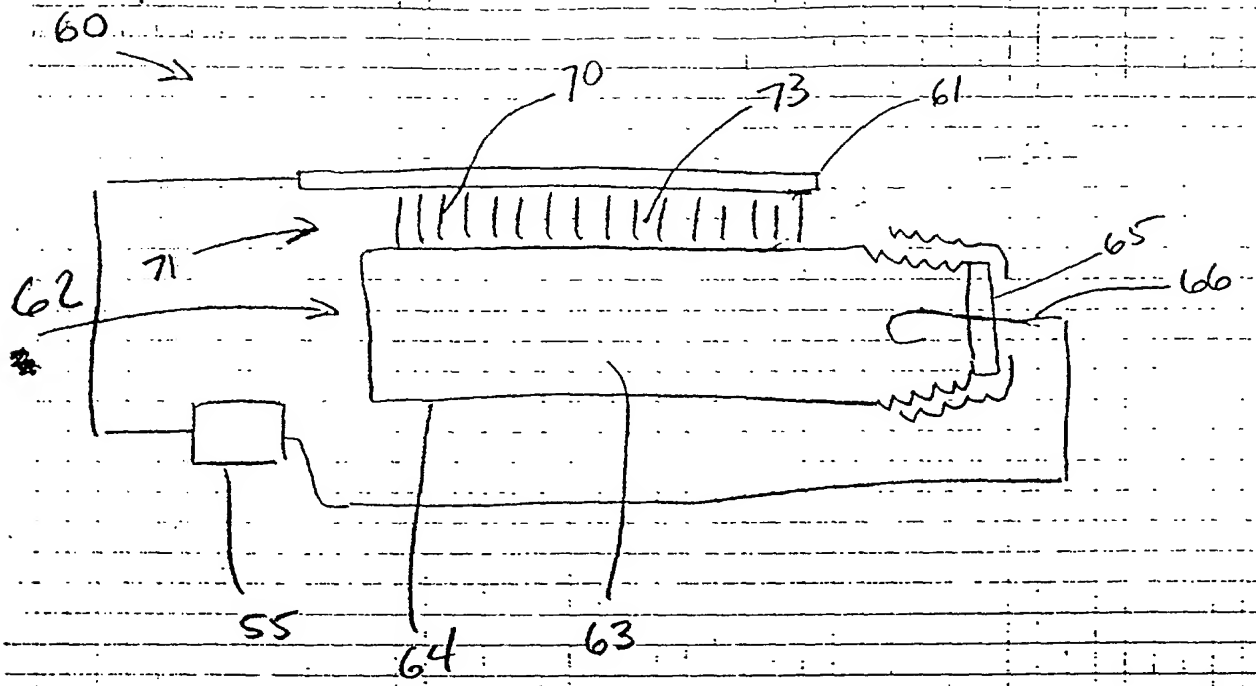



FIG. 6

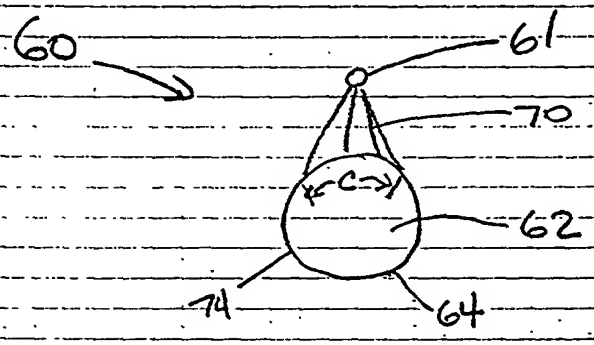



FIG. 7

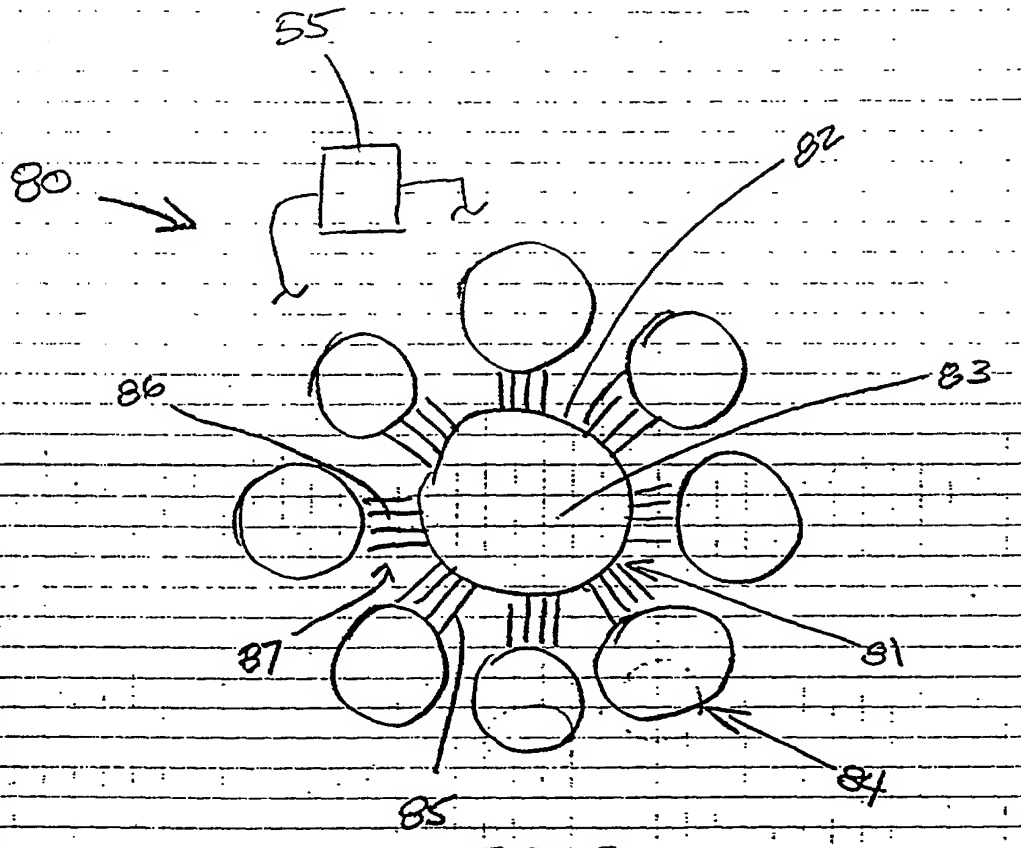



FIG. 8

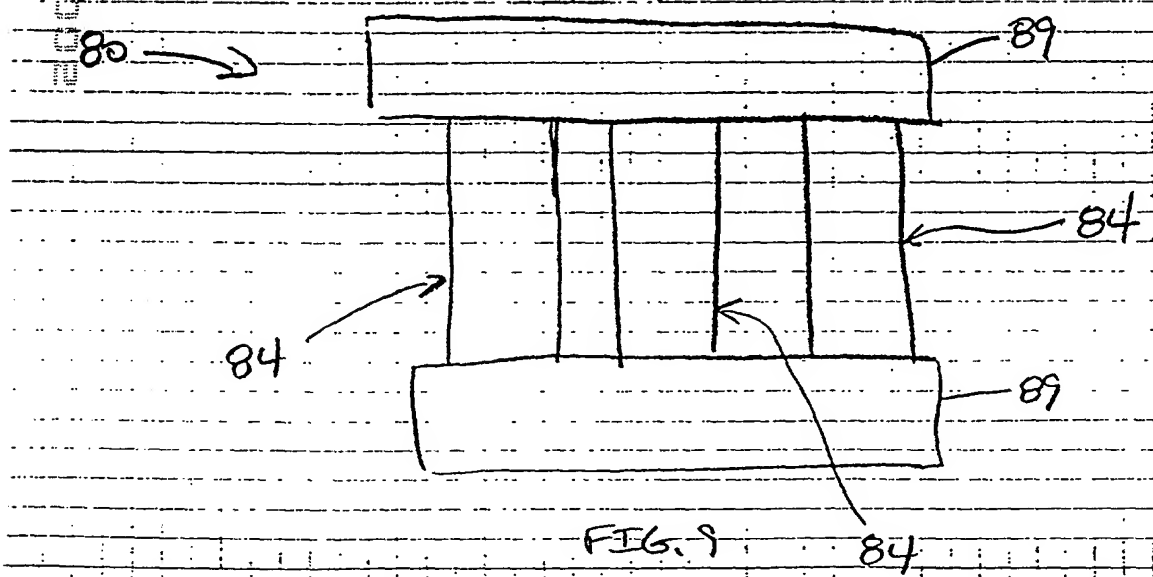



FIG. 9

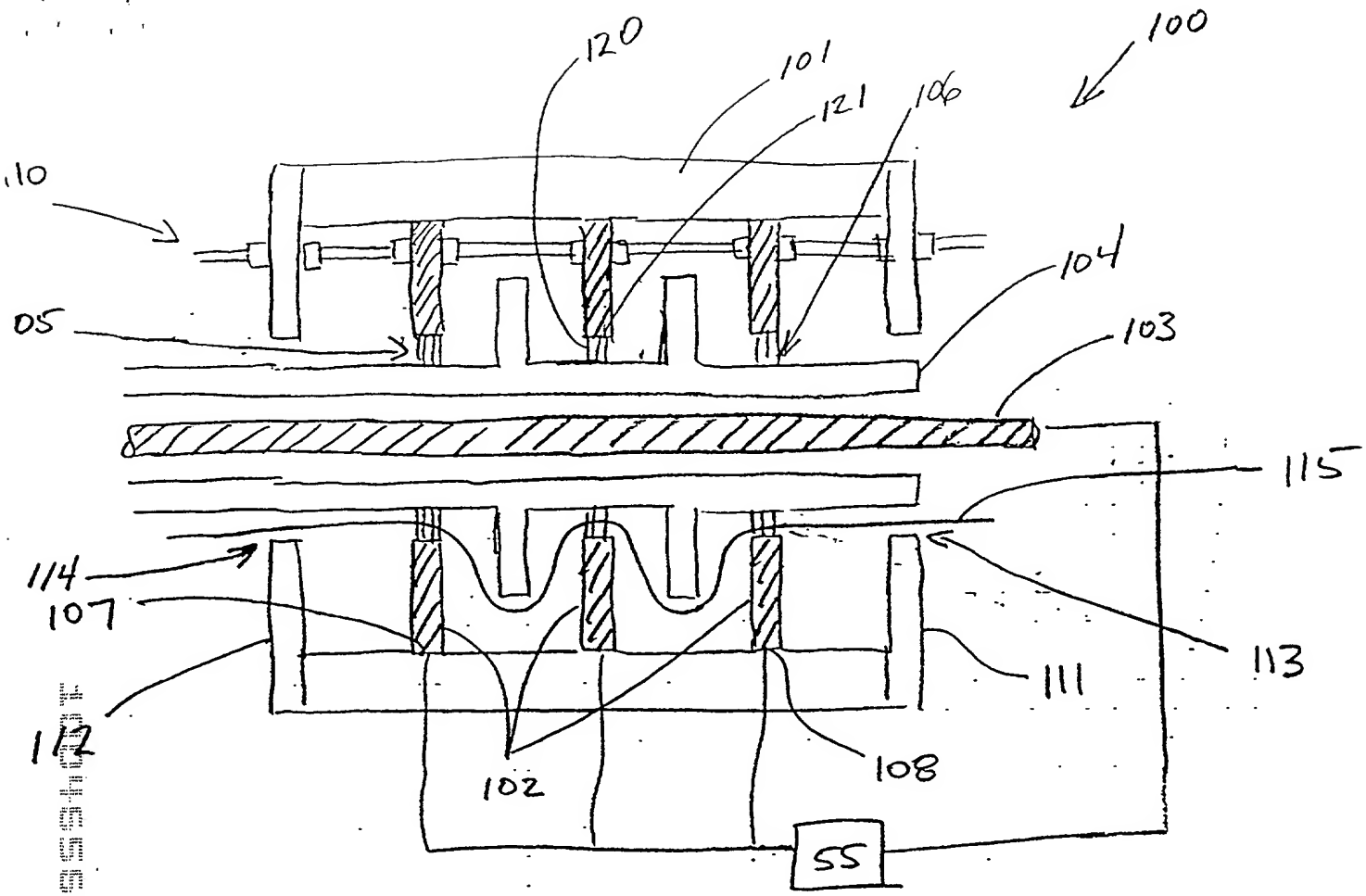

100
120
101
121
106
110
104
105
103
115
114
107
113
111
112
102
108
55

FIG. 10

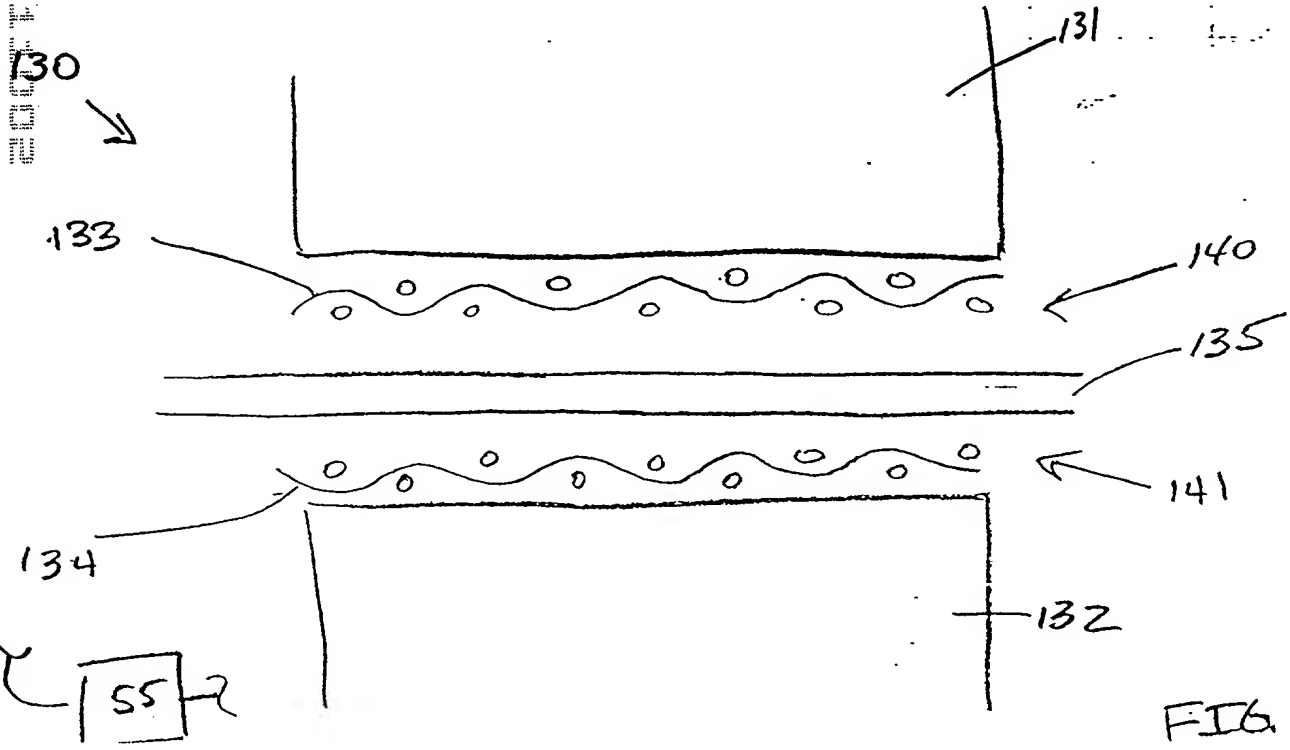

130
131
133
140
135
141
134
132
55

FIG. 11

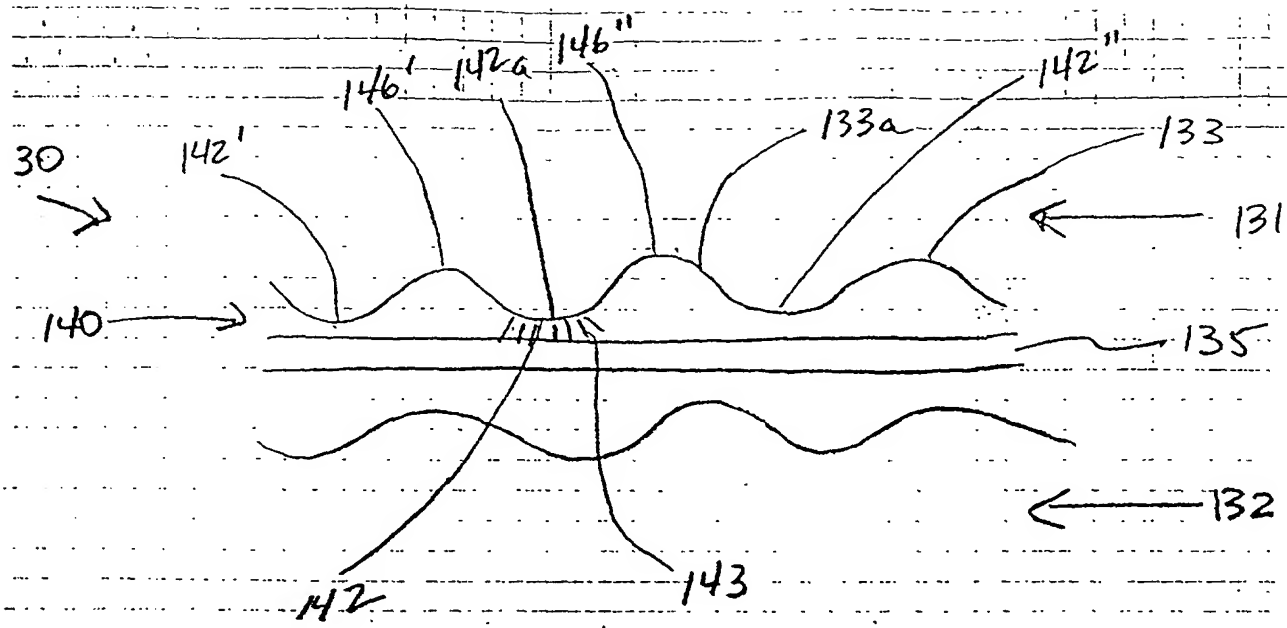

30
142'
146'
142a
146"
142"
133a
133
131
140
135
132
142
143

FIG. 12

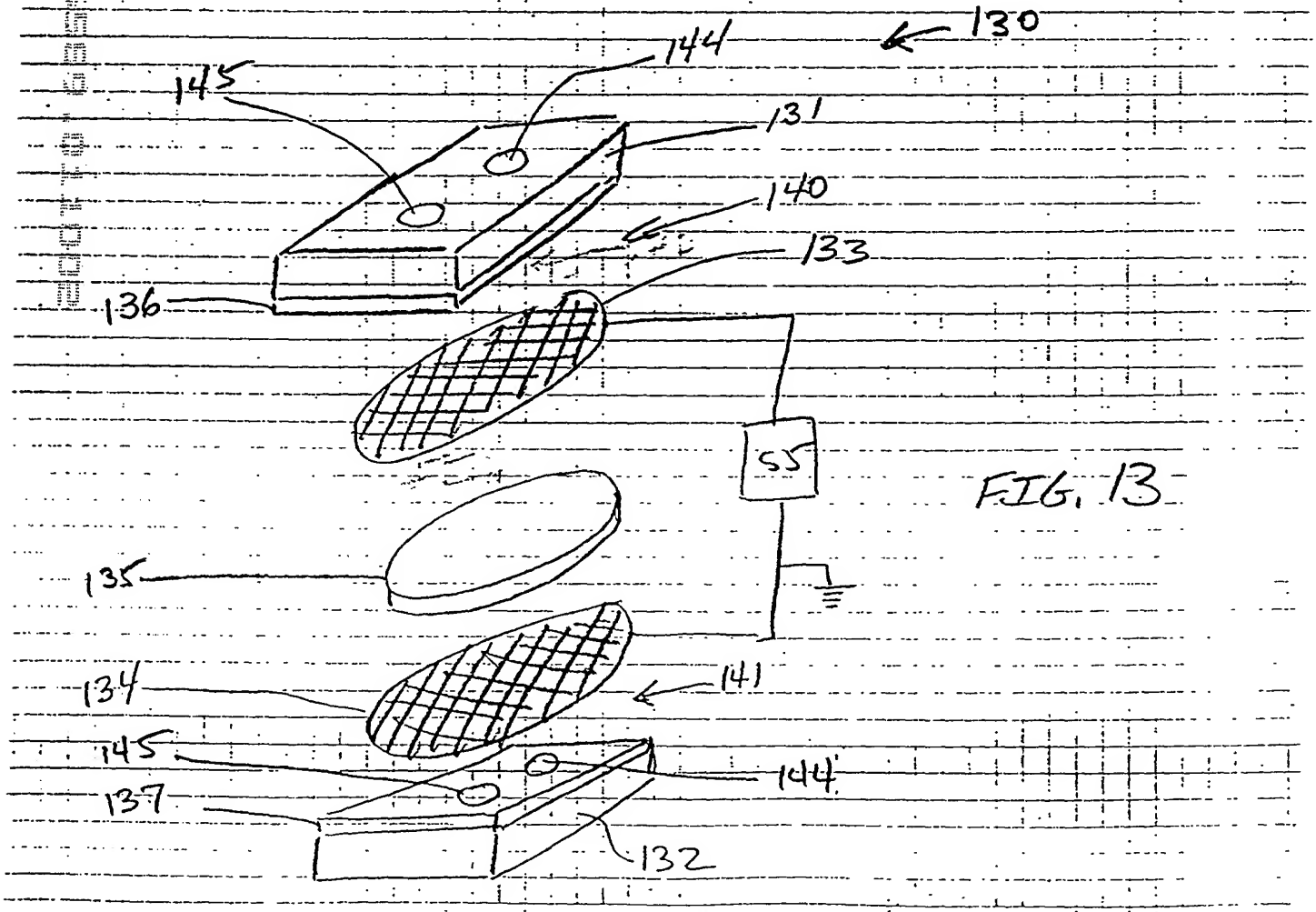

130
144
145
131
140
133
136
SS
135
134
141
145
144'
137
132

FIG. 13

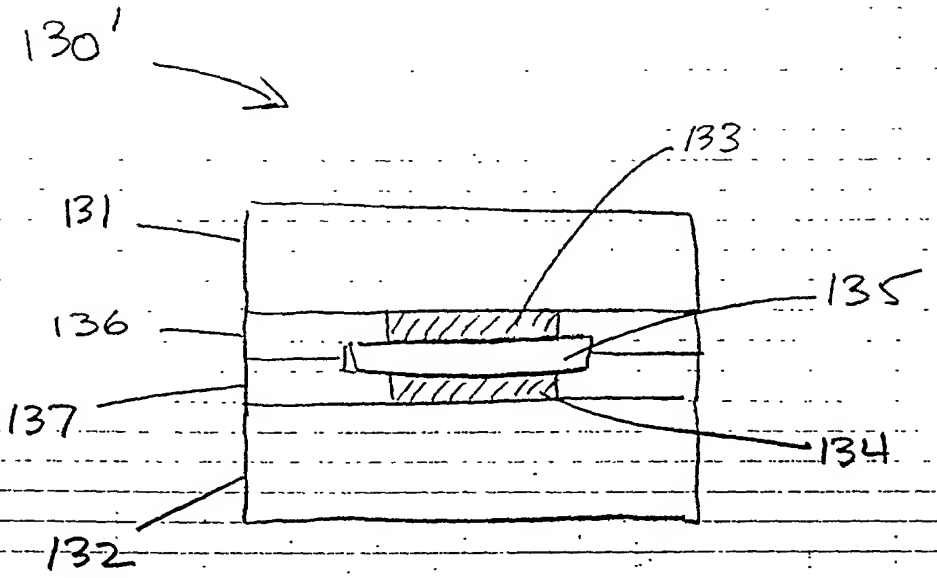



FIG. 14

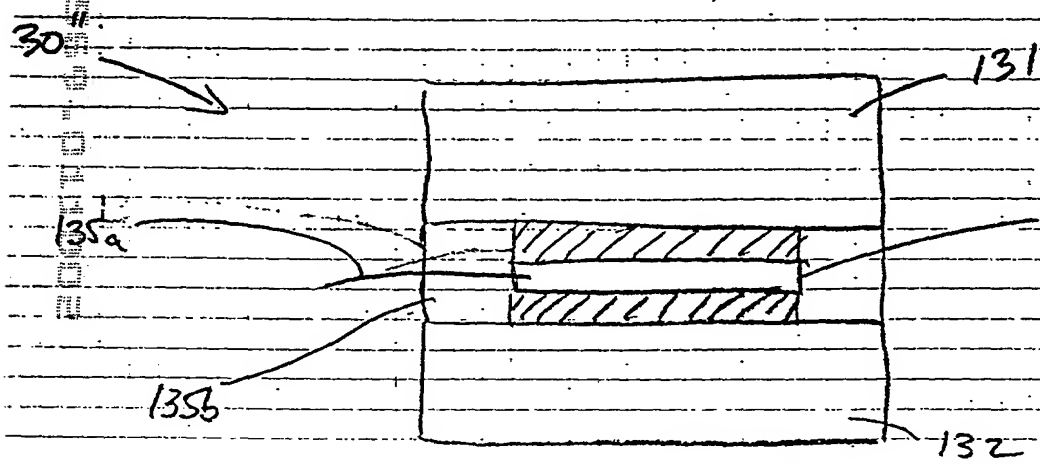



FIG. 15

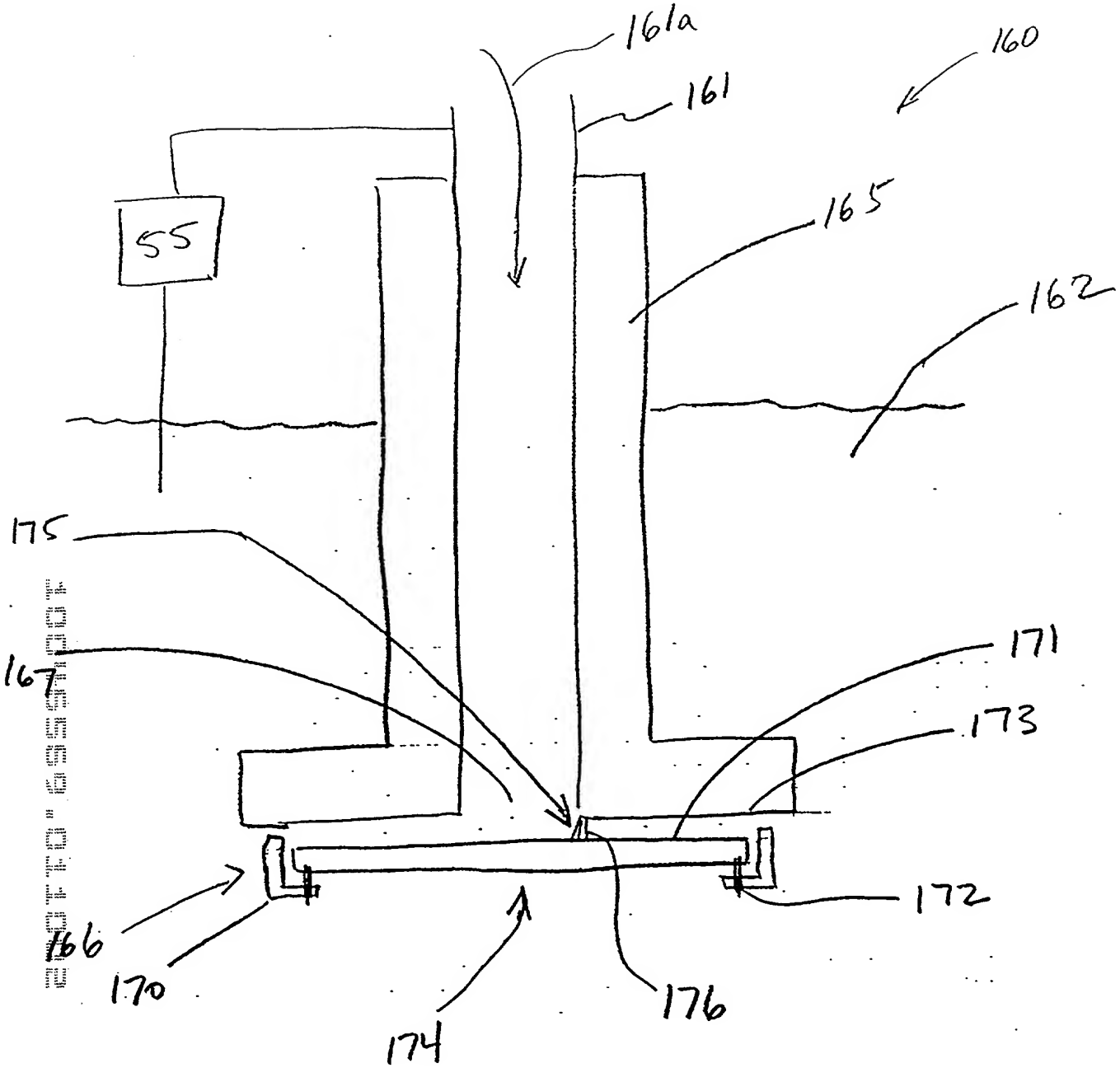



FIG. 16

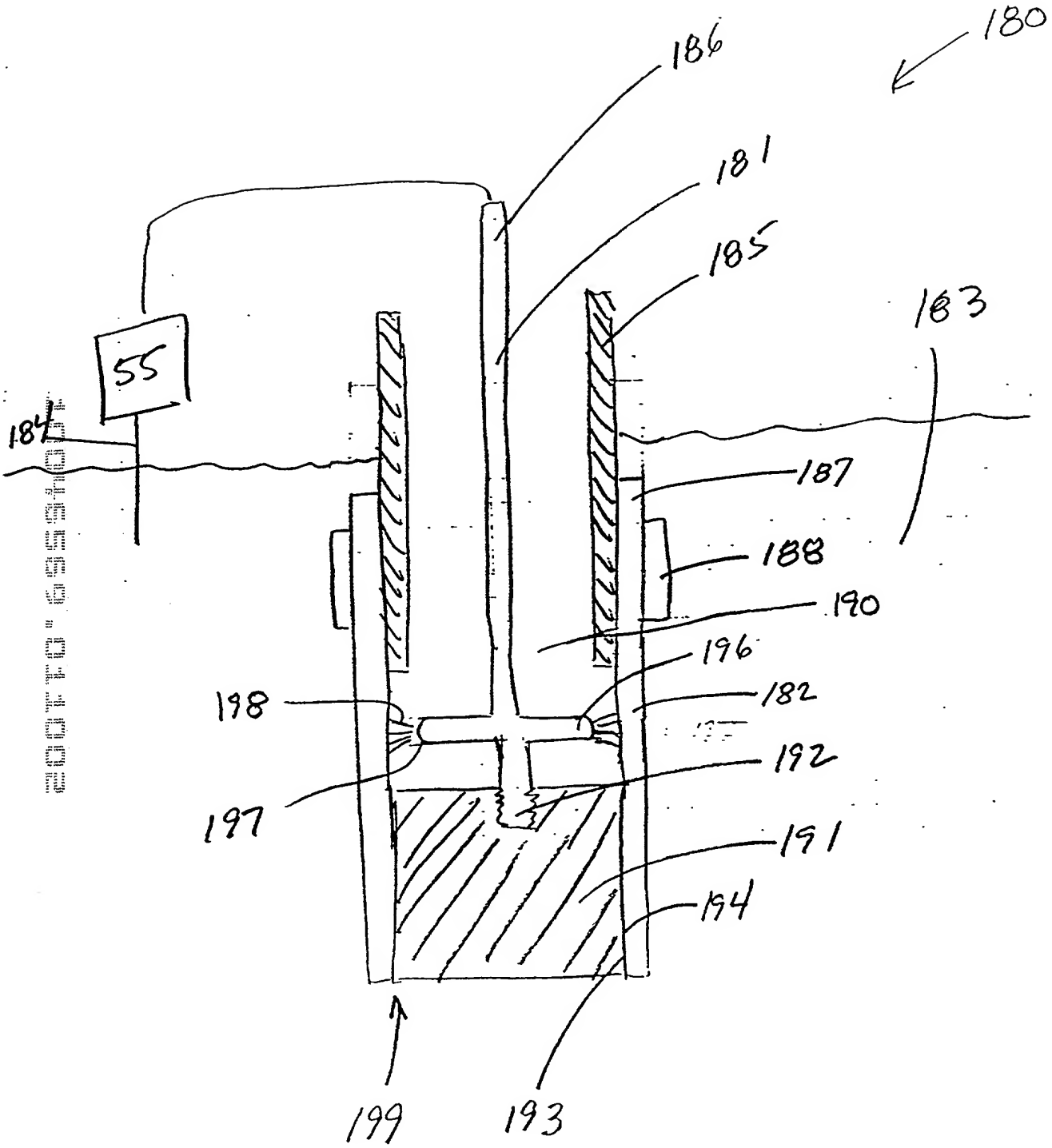

180
186
181
185
183
55
184
187
188
190
196
198
182
192
197
191
194
199
193

FIG. 17

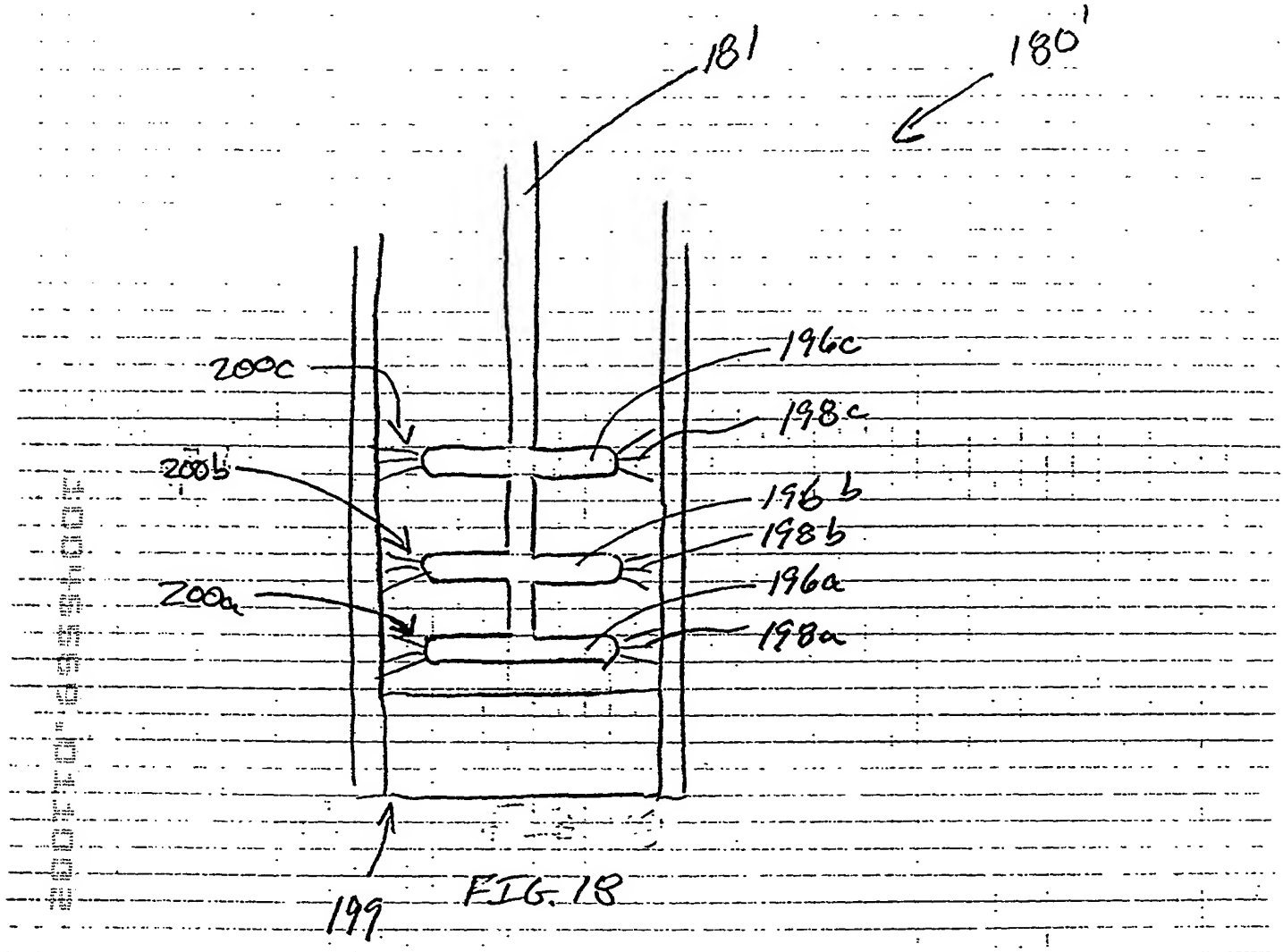



FIG. 18

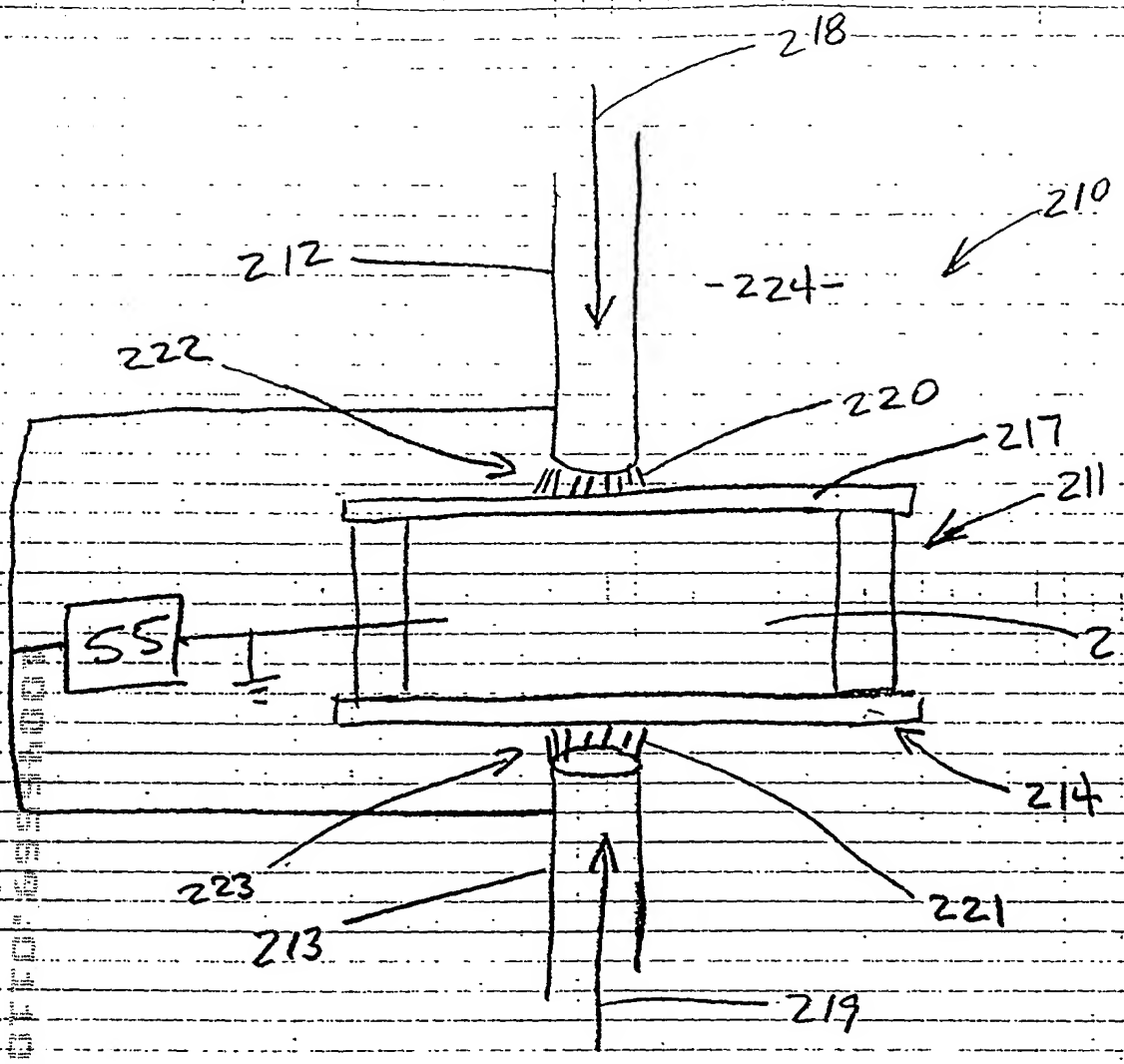



FIG. 19

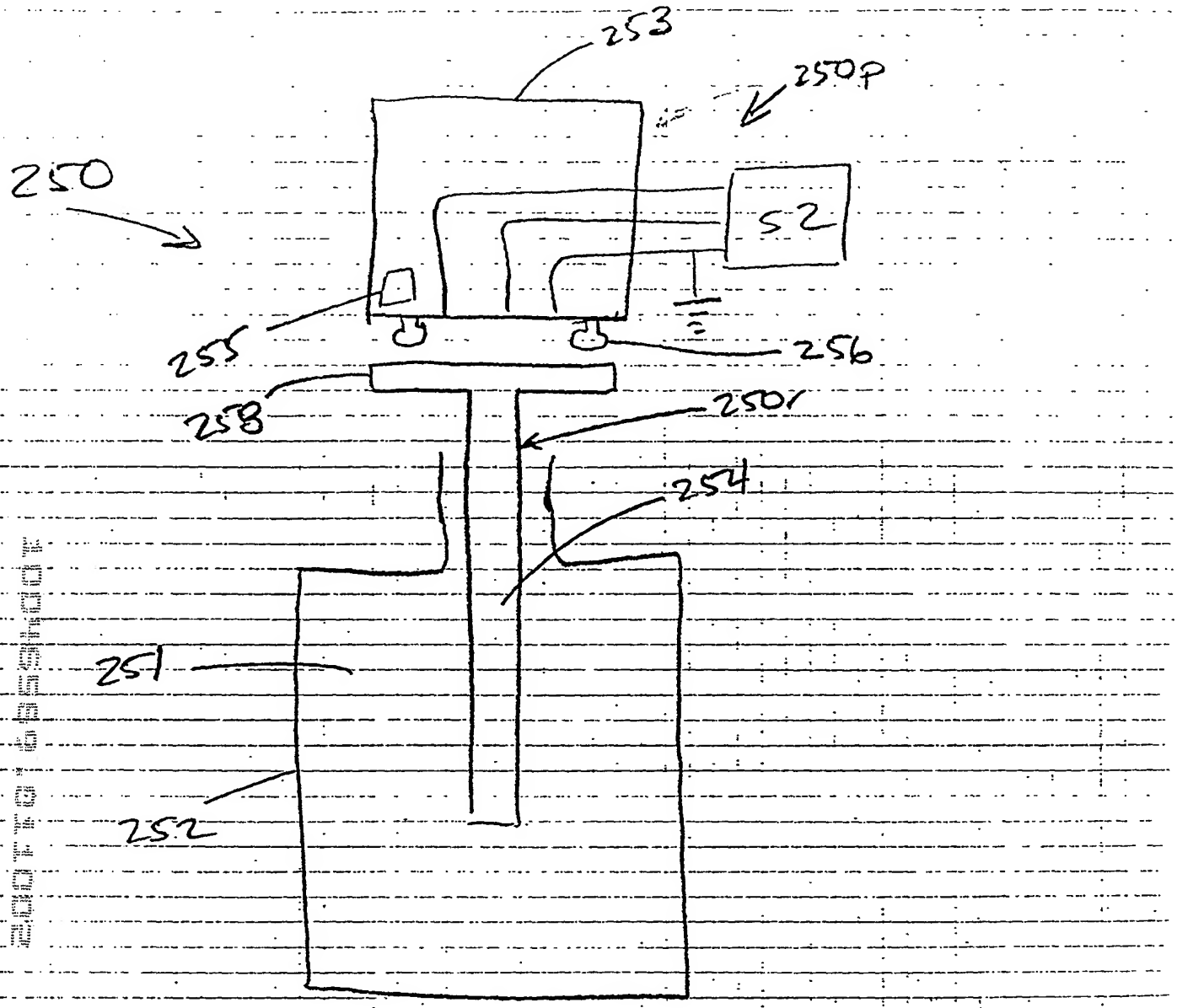



FIG. 20

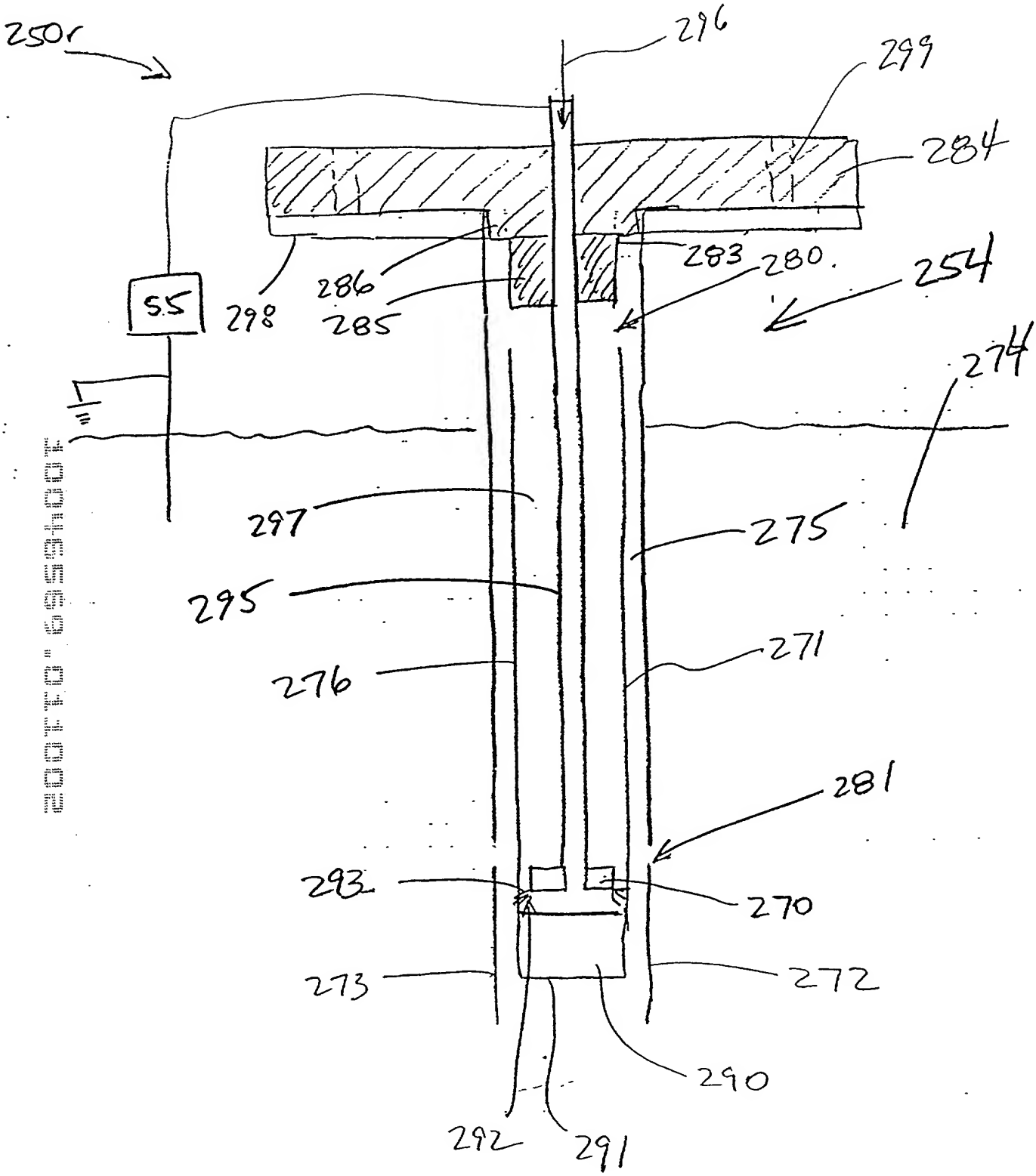

250r
296
299
284
286
283
280
254
55
298
285
274
297
275
295
271
276
281
293
270
273
272
290
292
291

FIG. 21

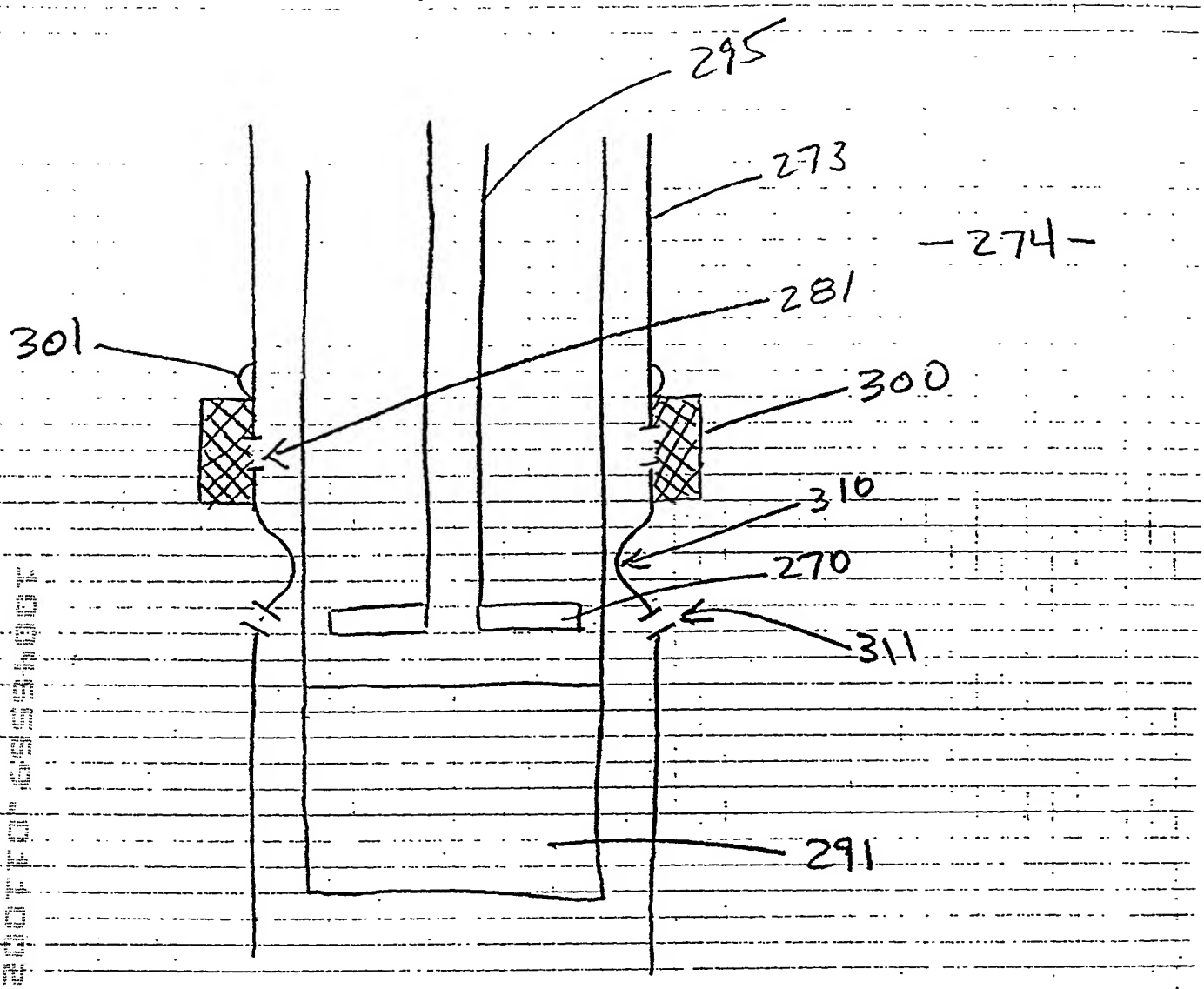



FIG. 22

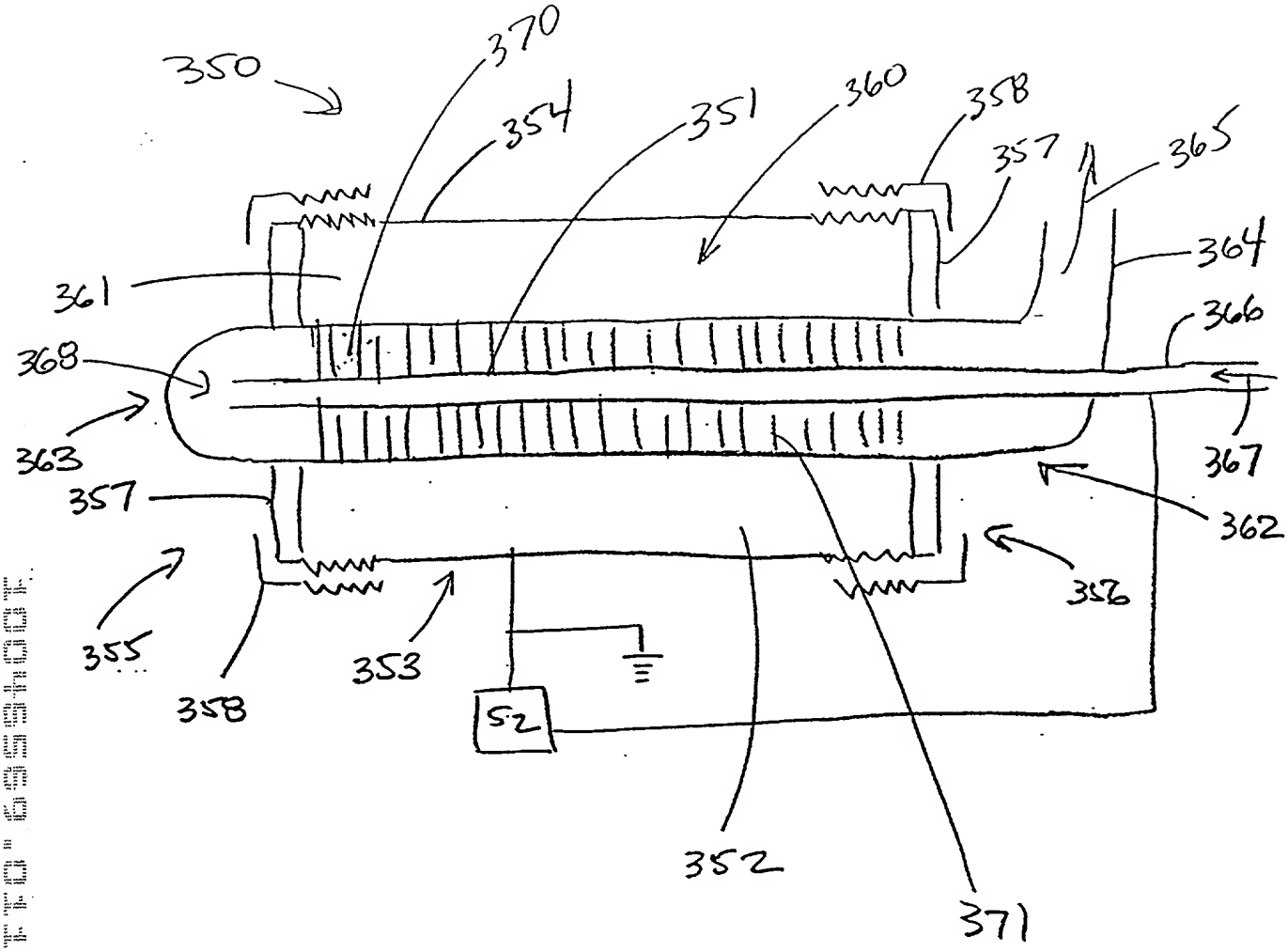

350
370
354
351
360
358
357
365
364
361
366
368
363
367
357
362
356
355
358
353
S2
352
371

FIG. 23

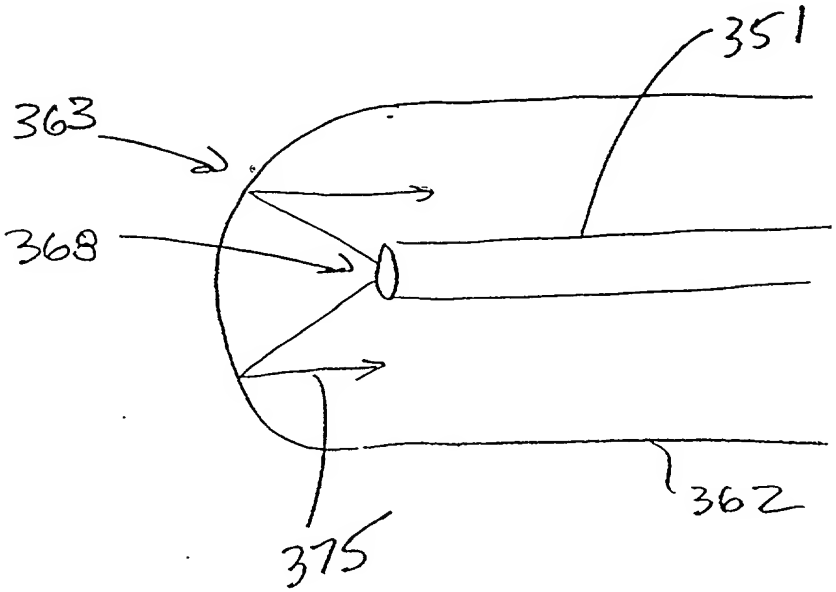

351
363
368
362
375

FIG. 24

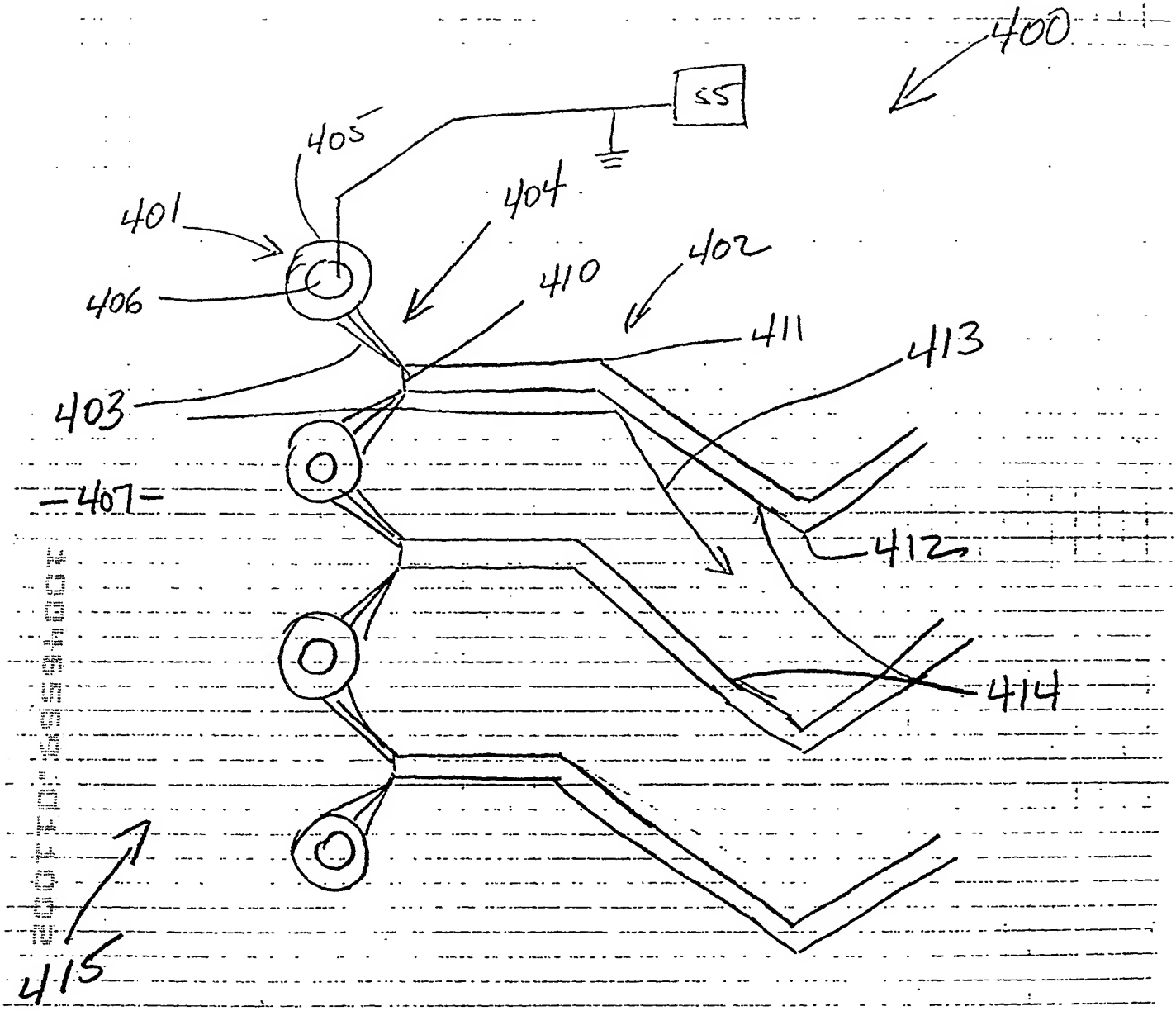



FIG. 25

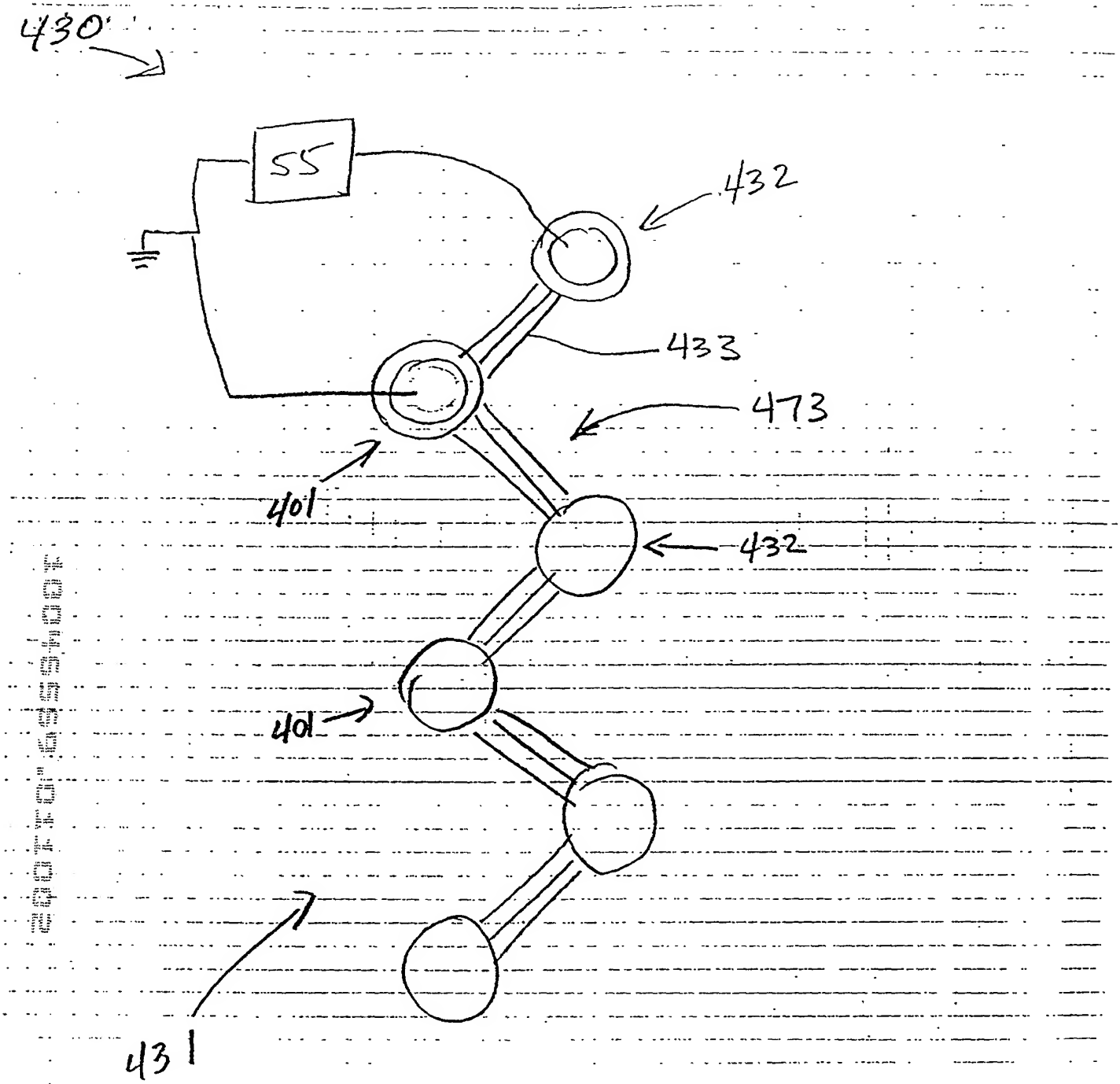



FIG. 26

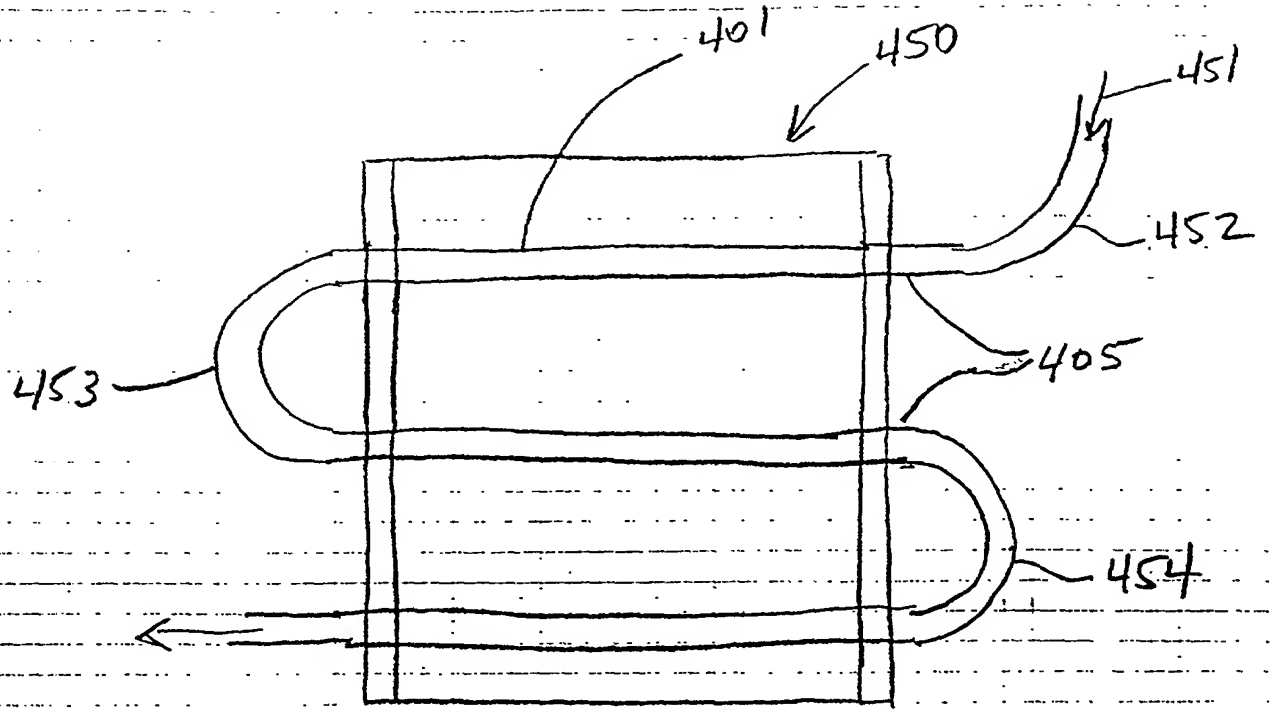



FIG. 27

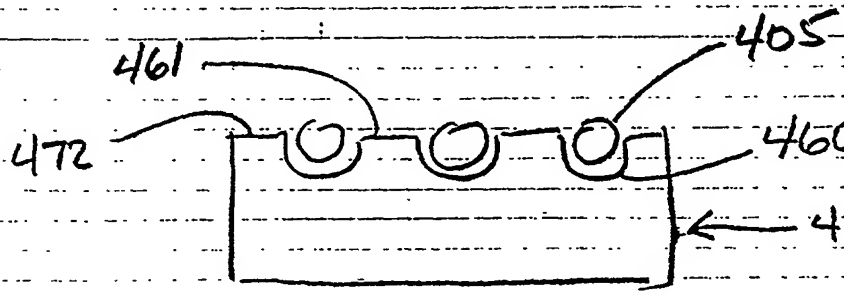



FIG. 28

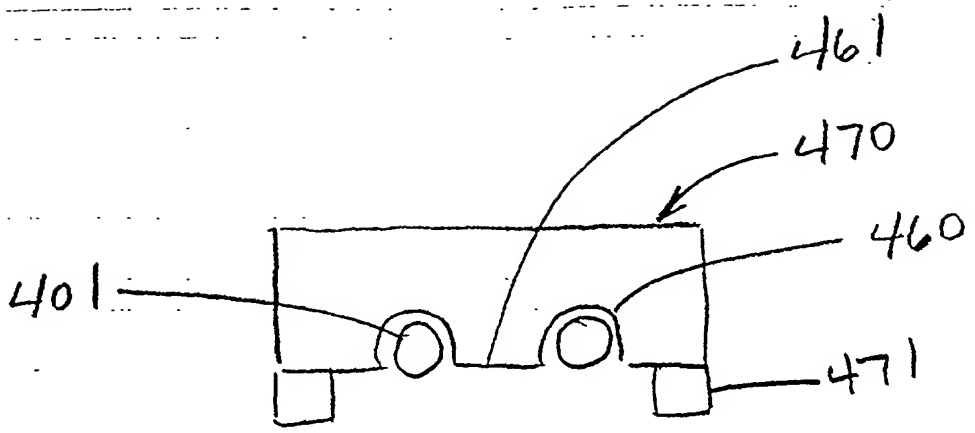



FIG. 29

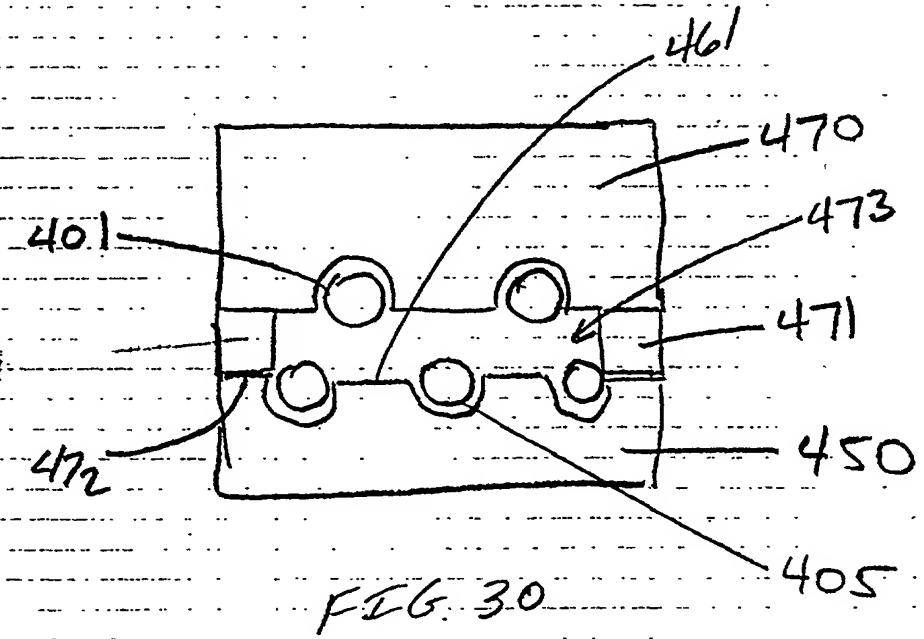
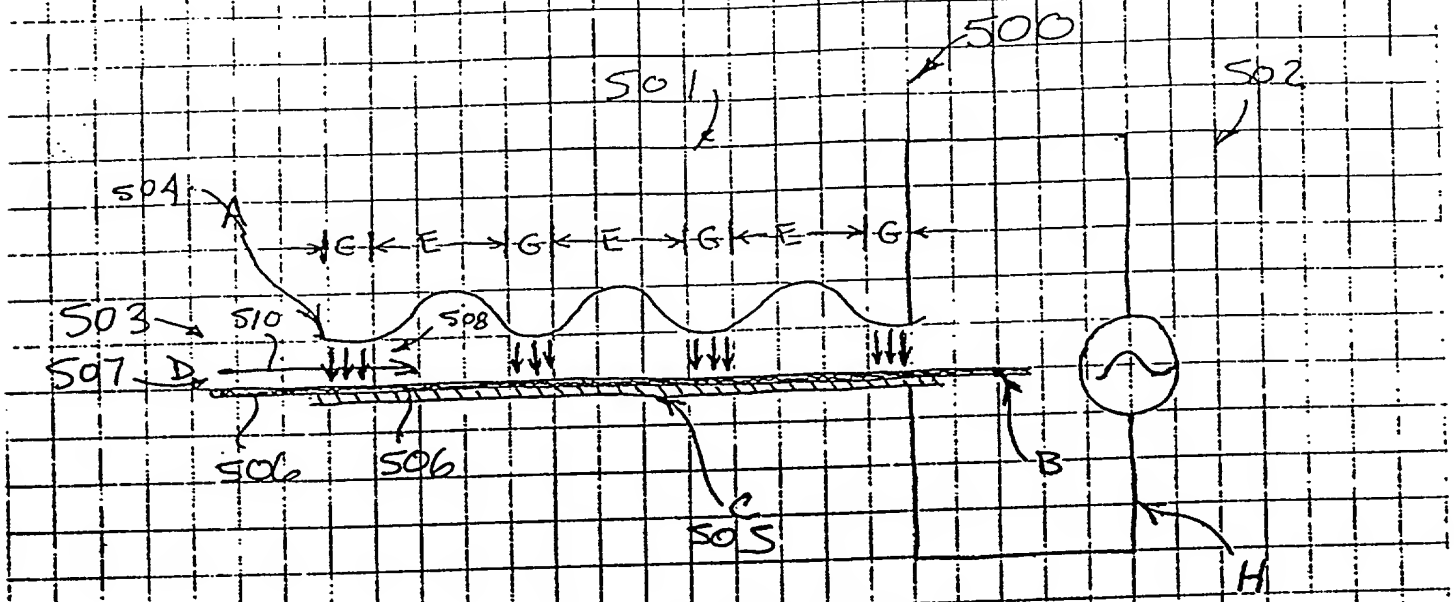



FIG. 30

# BASIC CONFIGURATION




A WIRE (CONDUCTOR)
B DIELECTRIC
C PLATE (CONDUCTOR)
D AIR FLOW (CAN ALSO BE INTO SHEET)
E AREA OF LOWEST STRESS
G DISCHARGE, HIGHEST STRESS
H HIGH VOLTAGE, ALTERNATING CURRENT OR HIGH VOLTAGE PULSED DC

FIG. 31

CURRENT LIMITATION AT DISCHARGE G

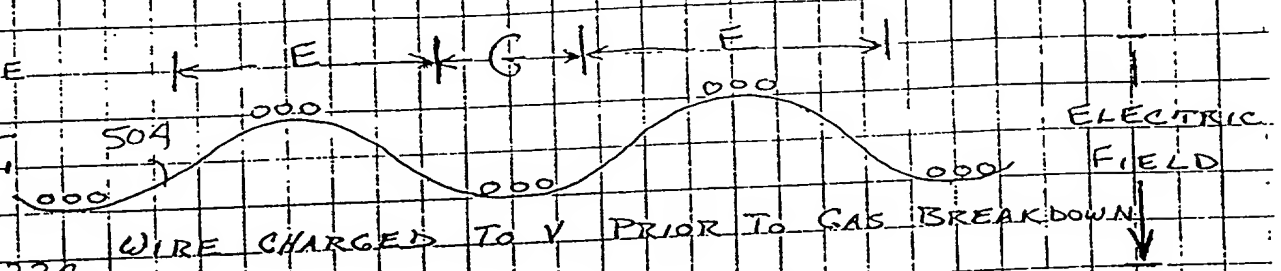



FIG. 32a WIRE CHARGED TO V PRIOR TO GAS BREAKDOWN

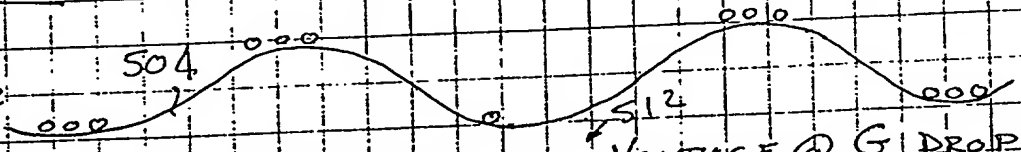



FIG 32b GAS BREAKDOWN VOLTAGE @ G DROPS

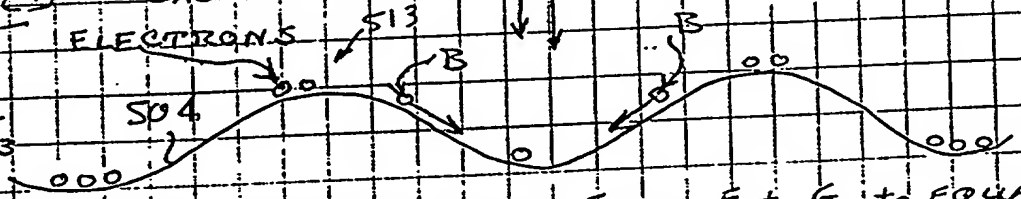



FIG 32c ELECTRONS MOVE FROM E to G to EQUALIZE V

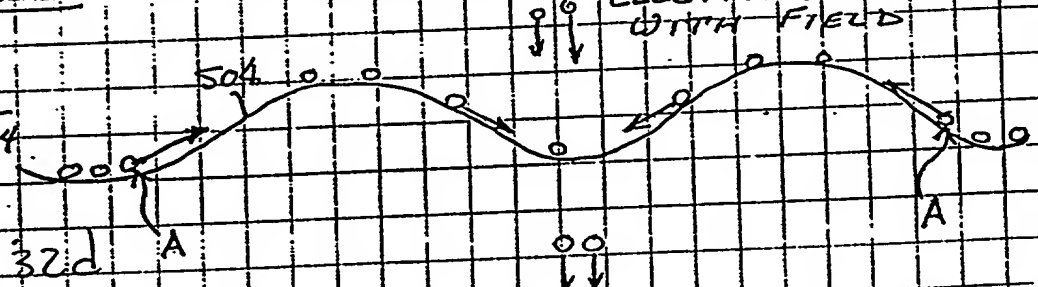



FIG 32d

ELECTRON MOVEMENT A NOT PERMITTED SINCE ELECTRONS WON'T MOVE AGAINST FIELD

THERE FOR WHEN DISCHARGE >> FASTER THAN CHARGING, ELECTRONS AVAILABLE FOR DISCHARGE @ G CAN ONLY BE SUPPLIED FROM G AND ADJACENT Es.

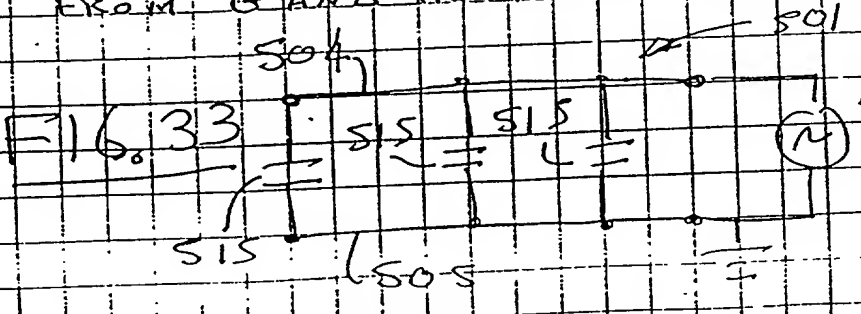



FIG. 33

FILLING SPACES WHICH DON'T CORONA

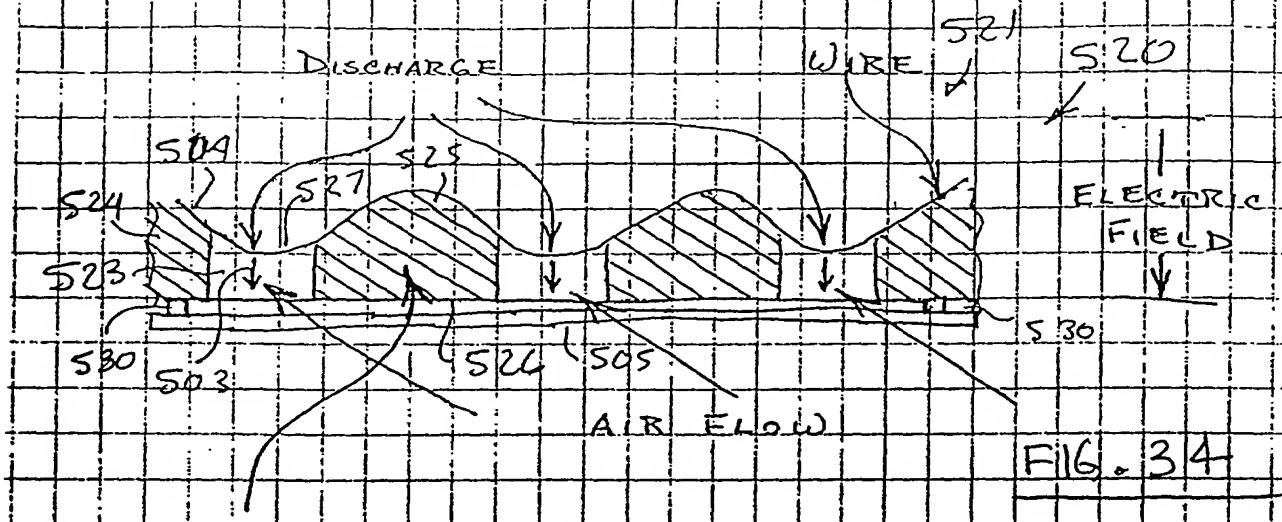


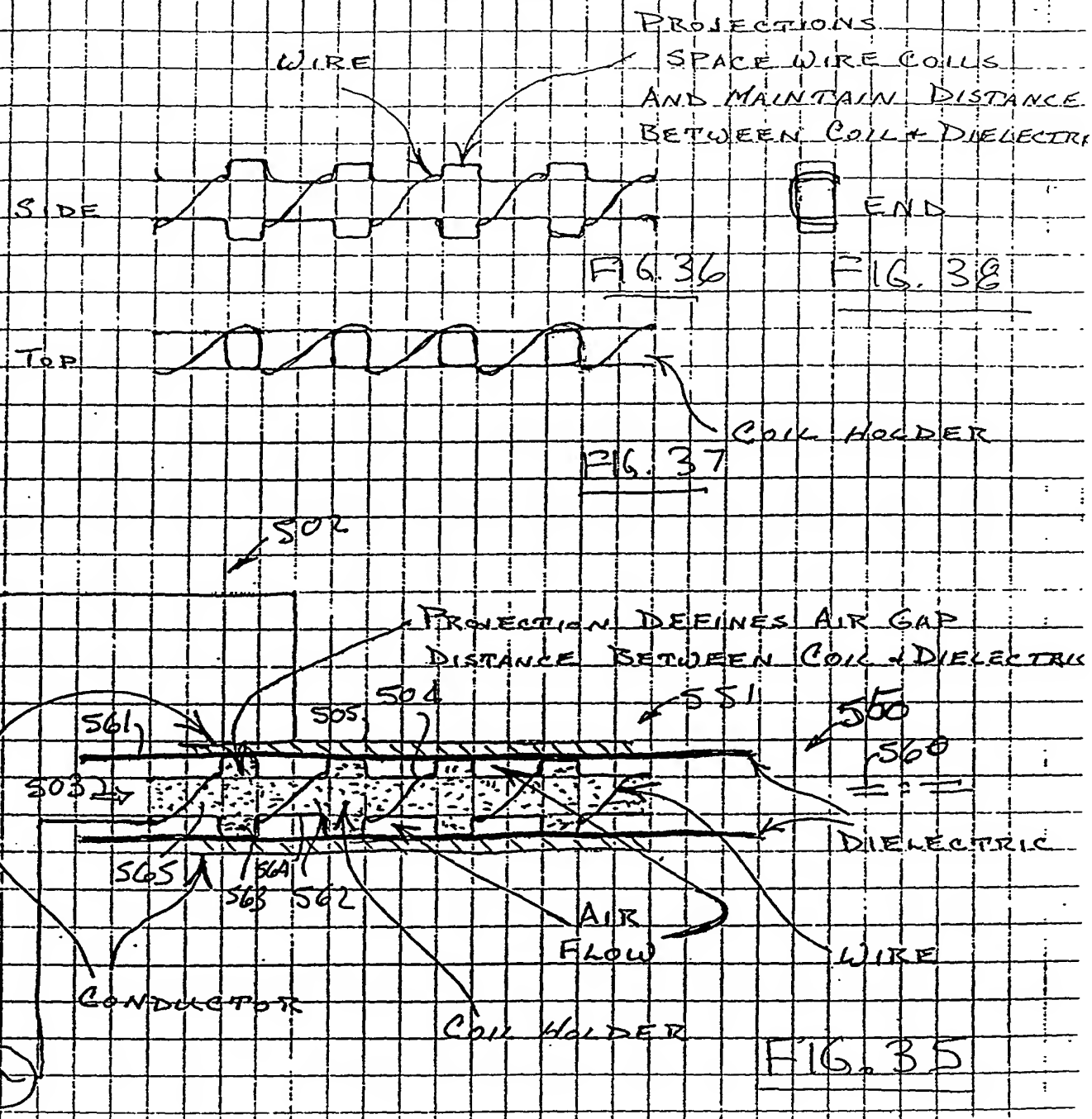

FIG. 3H

FILLED SPACES

NOTE

AIR FORCED TO FLOW IN AREAS WHERE THERE IS DISCHARGE

BASIC FORM WITH DIELECTRIC SPACER



ARRANGEMENT OF BASIC FORM

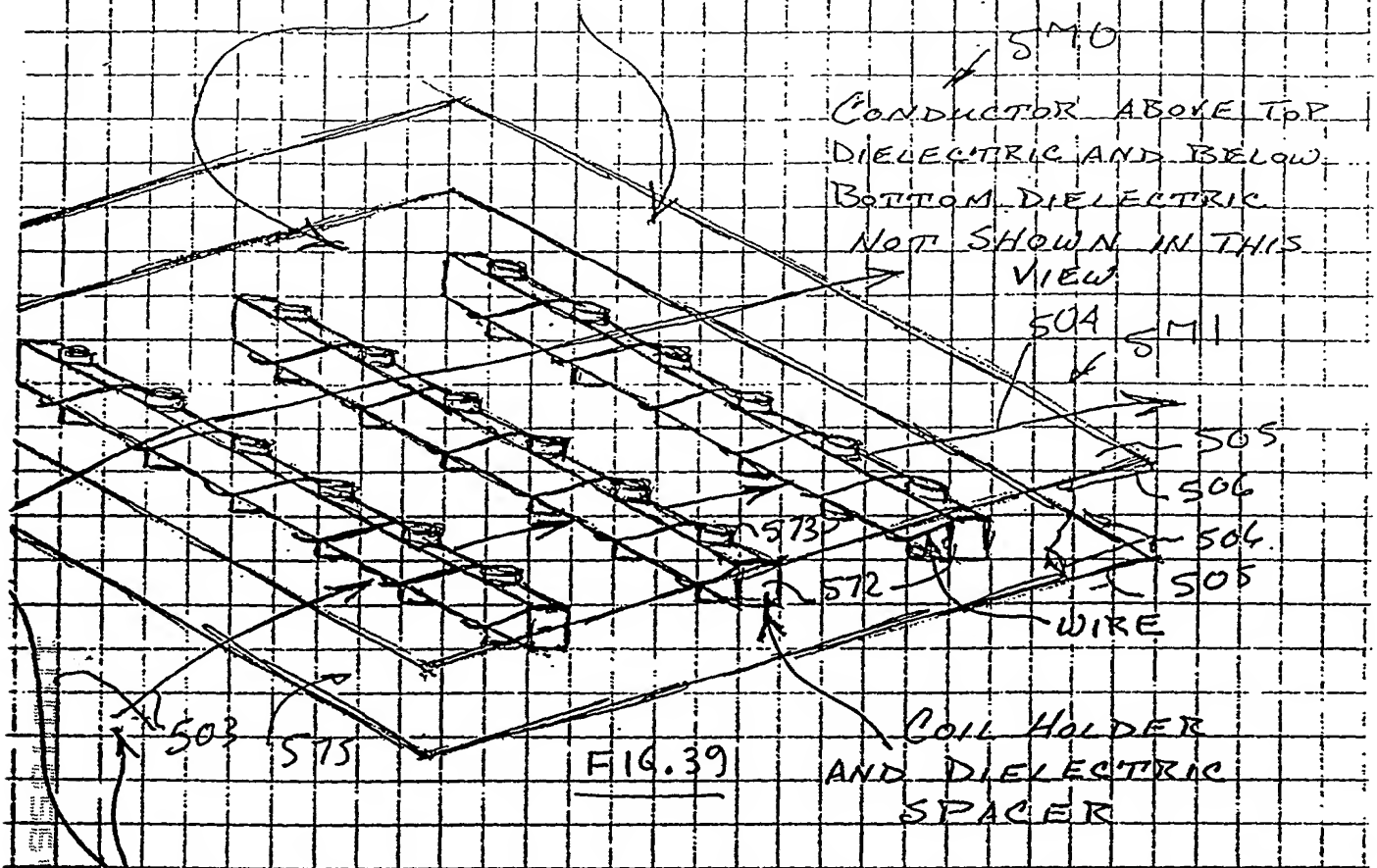



FIG. 39

AIR FLOW OVER TOP + BOTTOM OF COILS

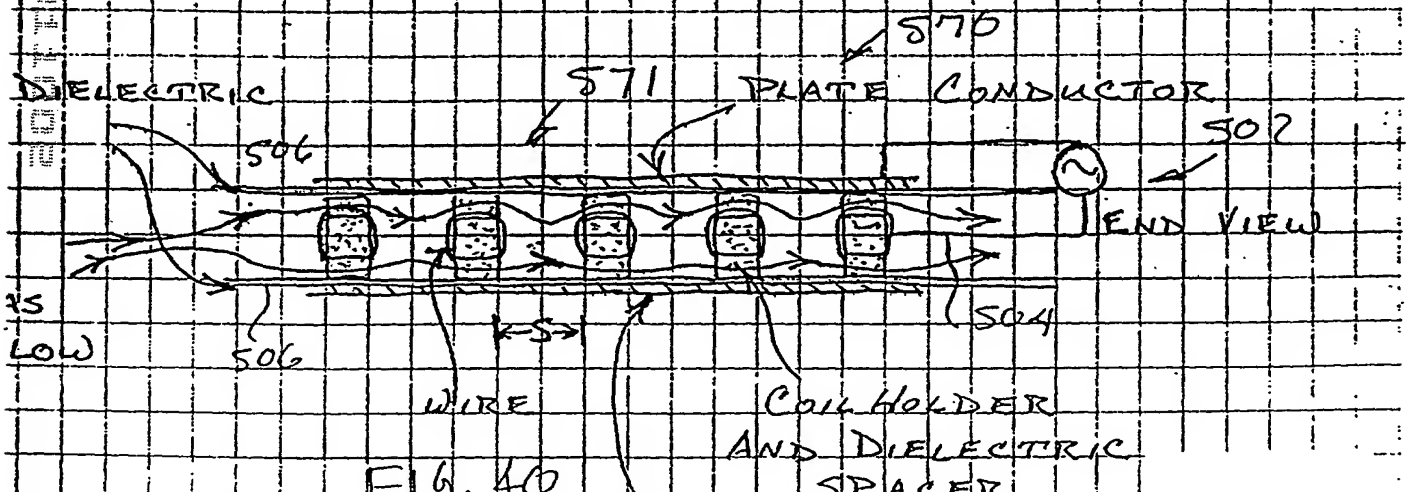



FIG. 40

NOTE:
S, OR SPACE BETWEEN COIL CAN VARY FROM TOUCHING ↑, BUT IF CURRENT LIMITATION AT DISCHARGE POINT IS TO BE MAXIMIZED THEN THE WIRE COILS SHOULD NOT TOUCH.

CIRCULAR ARRANGEMENT

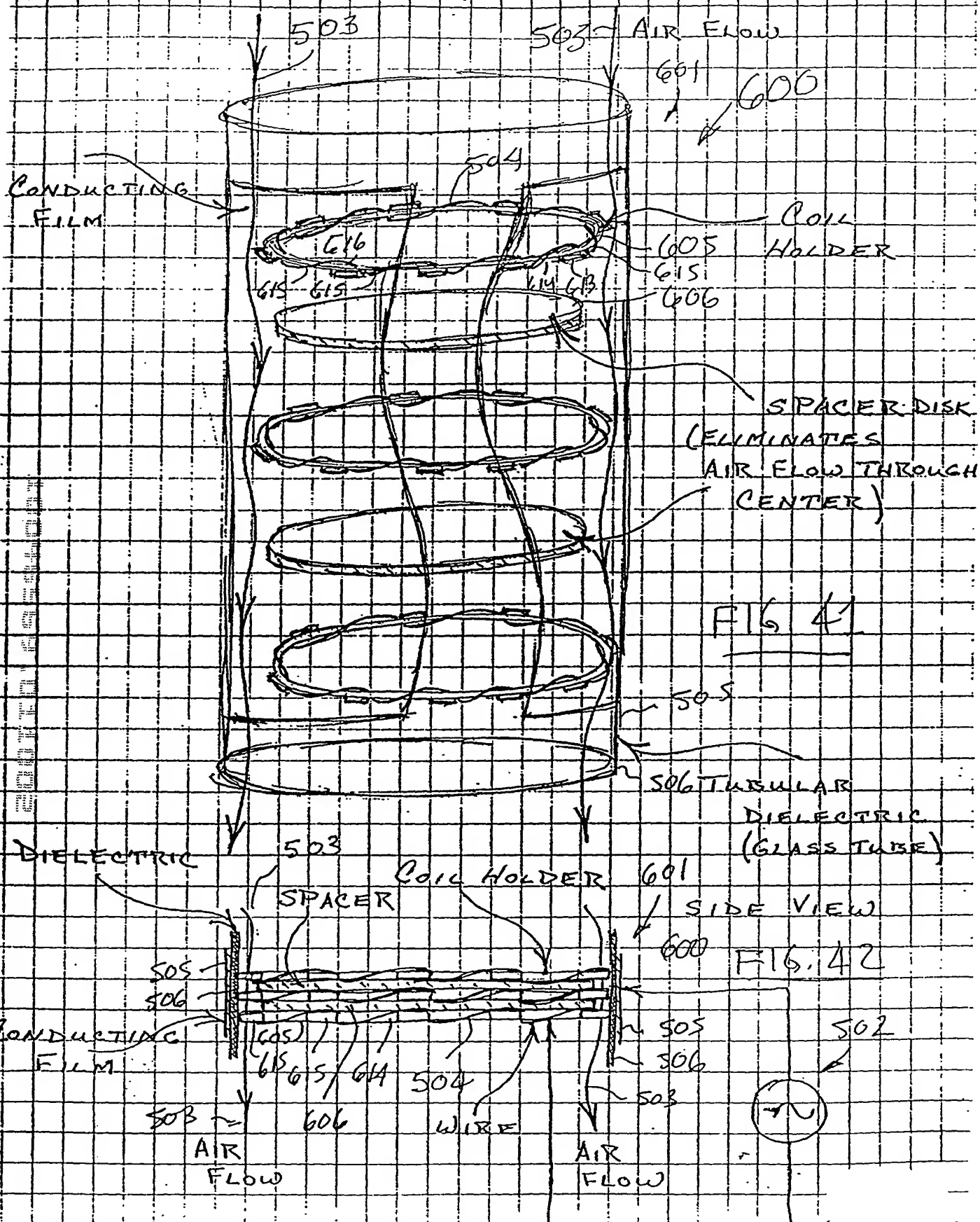



FIG. 41

FIG. 42

CIRCULAR ARRANGEMENT

END VIEW

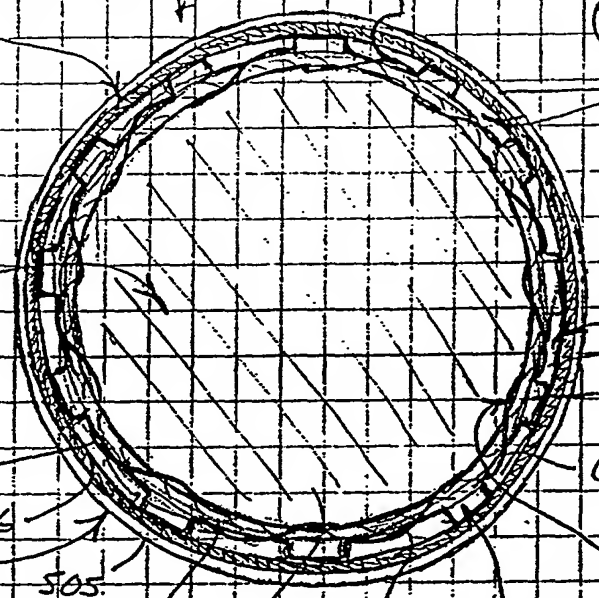



FIG. 43

# THREADED ROD REACTOR

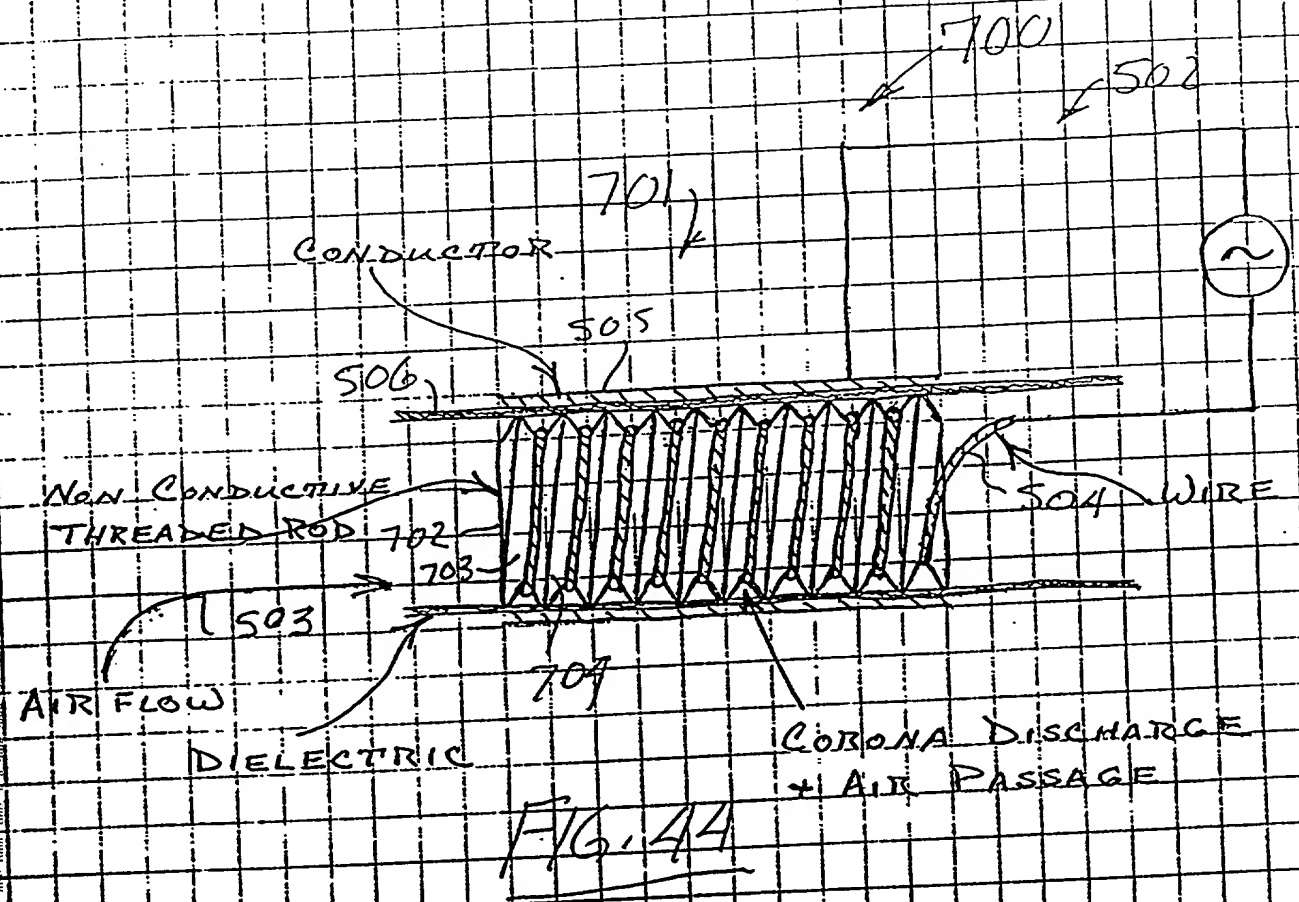



FIG. 44

NOTES

1. WIRE IS WRAPPED AT THE BOTTOM OF THE THREAD CUT IN THE NON CONDUCTIVE ROD
2. AIR FLOWS ALONG PASSAGE FORMED BY APEX OF CUT THREAD AND DIELECTRIC CYLINDER (GLASS TUBE)
3. THE CONTINUOUS COIL BEHAVES AS A SINGLE CAPACITOR

# MODIFICATIONS TO THREADED ROD REACTOR

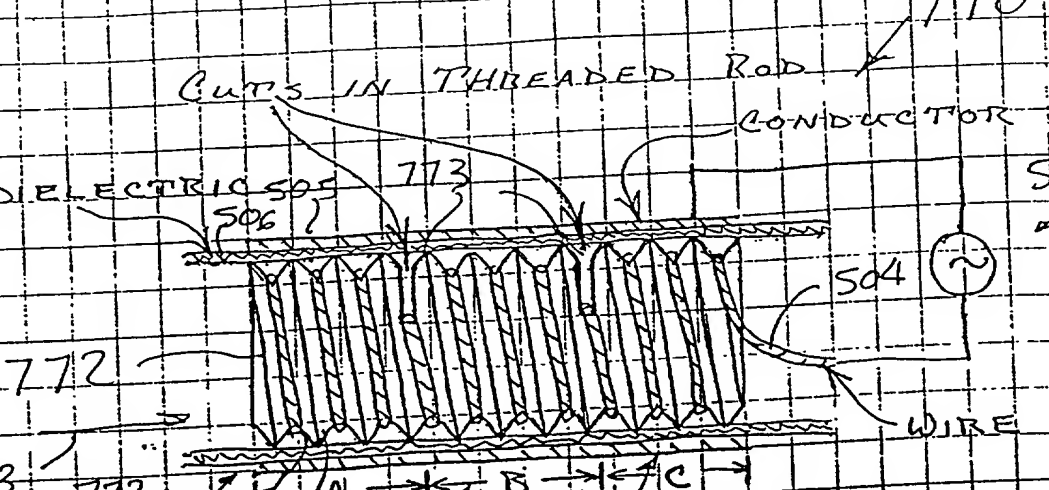



FIG. 45

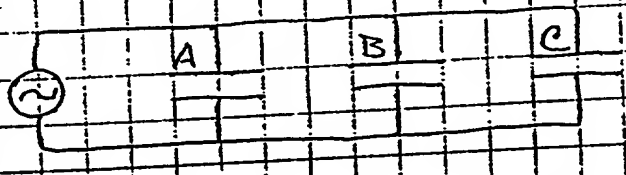
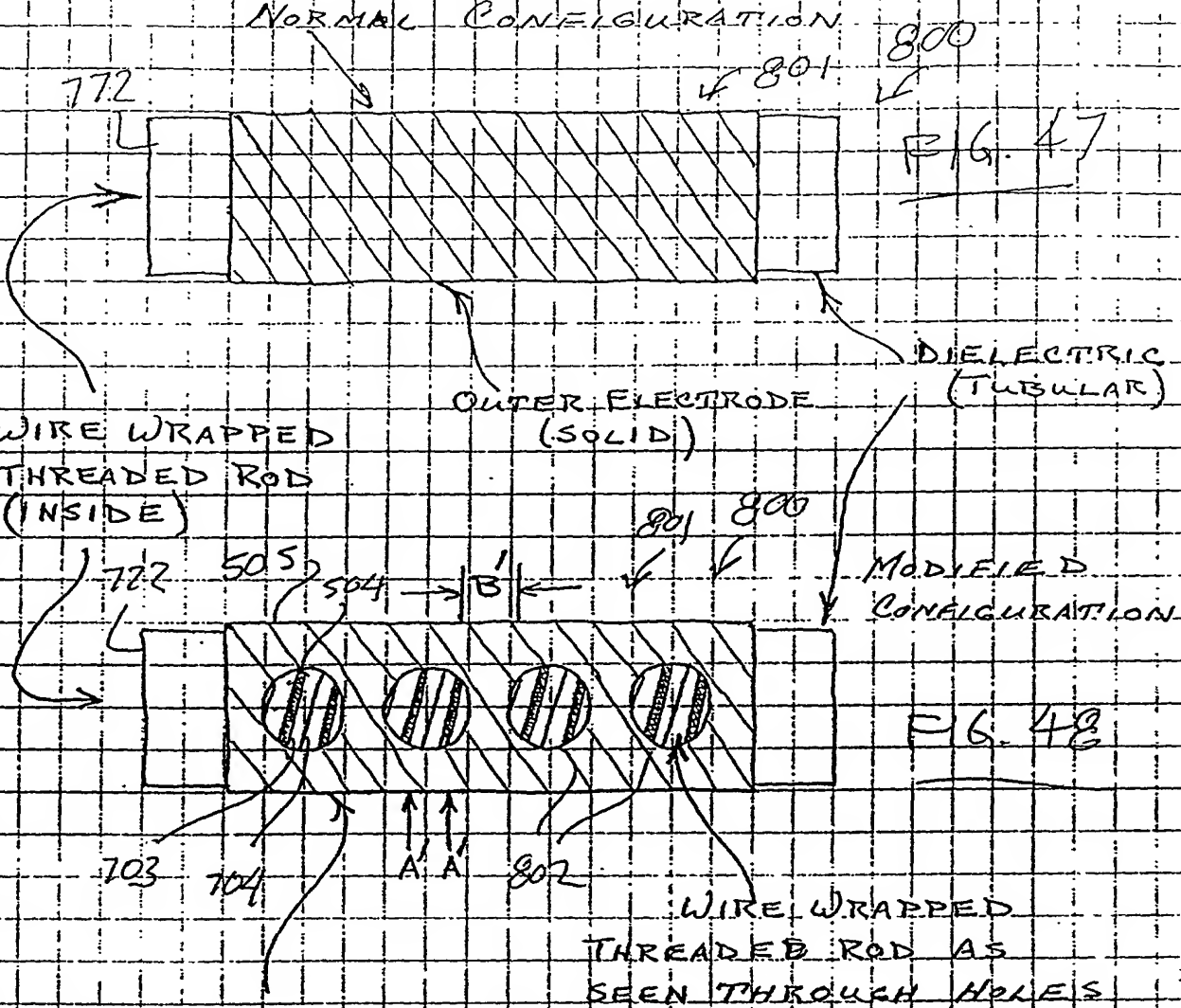



FIG. 46

NOTE:

1. THE REGIONS BETWEEN THE CUTS IN THE THREADED ROD ACT AS INDIVIDUAL CAPACITORS.
2. THE CUTS INCREASE THE AREA OF THE GAS FLOW PASSAGE, WHICH IS NORMALLY DEFINED BY THE THREAD AND THE DIELECTRIC.
   THIS INCREASE IN CROSS SECTIONAL AREA (IN THE CUT) DECREASES VELOCITY AND PROMOTES IRREGULAR GAS FLOW, THUS INCREASING GAS MIXING.

# MODIFICATIONS TO THREADED ROD REACTOR




NOTE:

HOLES IN OUTER ELECTRODE PRODUCE DISCONTINUITIES IN CAPACITANCE.
EQUIVALENT CIRCUIT WOULD BE A NUMBER OF PARALLEL UNEQUAL CAPACITORS.
IE. CAPACITANCE @ A WOULD BE A SINGLE WIRE WRAP
" @ B " " A DOUBLE " "

# TWISTED WIRE REACTOR

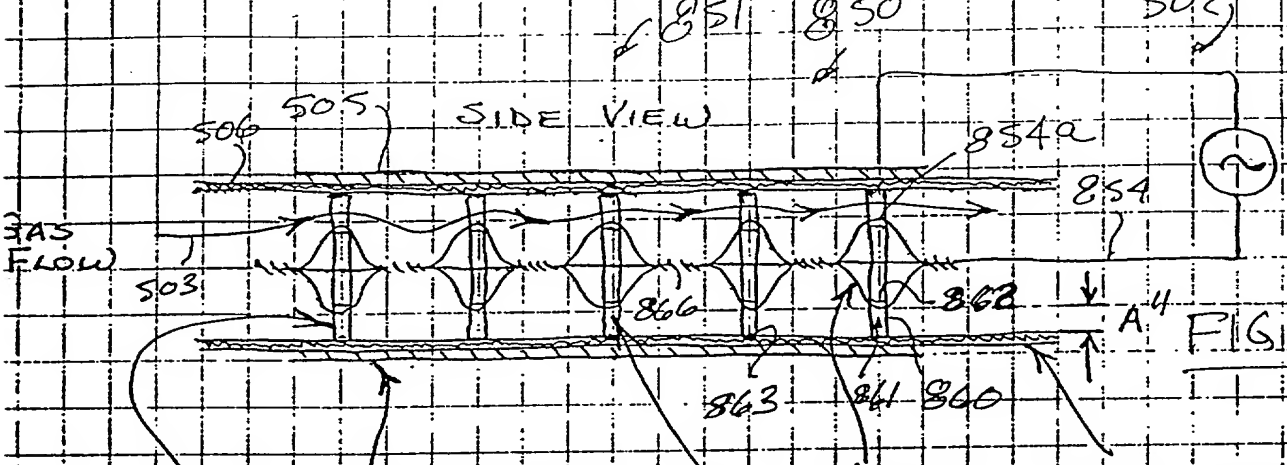



FIG. 49

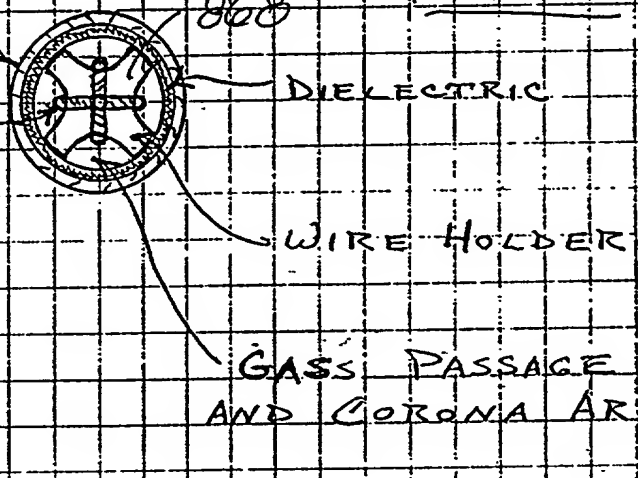



FIG. 50

NOTE:

IF GAP "A" KEPT SMALL, THEN DISCHARGE WILL BE A CORONA

IF GAP "A" INCREASED, THEN DISCHARGE WILL BECOME AN ARC. THE WIRE HOLDER CAN BE RECONFIGURED SO THAT THE AIR IS DIRECTED MORE PRECISELY THROUGH THE ARC.

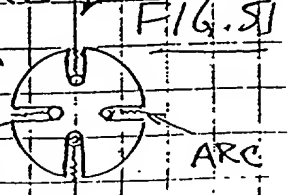



FIG. 51

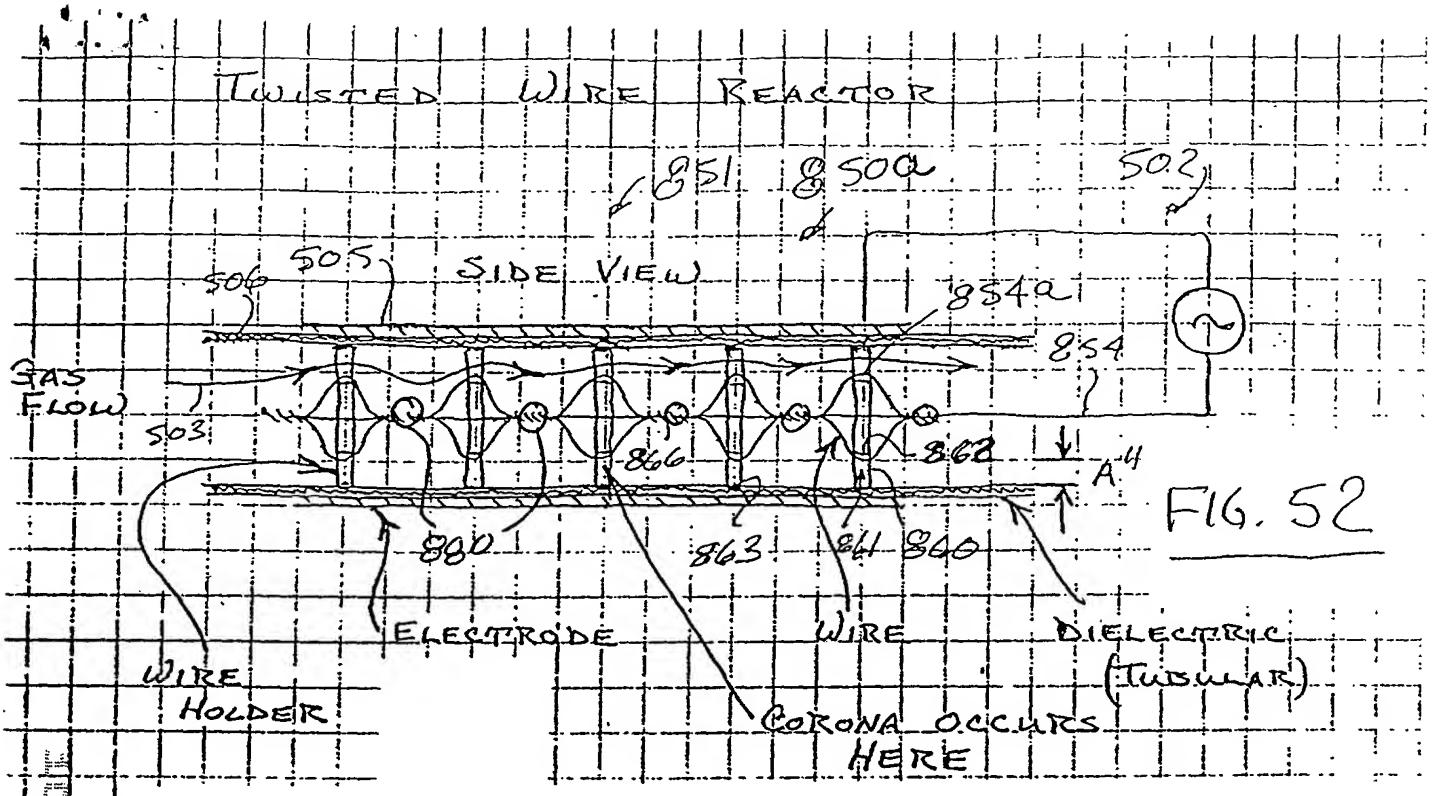



FIG. 52